

THE ART OF OLD PERU

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UNDER THE EDITORSHIP OF

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PREFACE

In the present work an attempt is made to choose from the wealth of the antiquities of Peru pieces of different periods and cultural spheres which are artistically important as well as archæologically significant. In this way, not only the narrow circle of specialists, but also all friends of true art, will be able to receive a living impression of the abundance, the individuality and the high quality of the creations of the spirit of Ancient Peru.

The plates and the illustrations throughout the text are accompanied by notes which are intended to supply a chronological basis for the arrangement of the pieces reproduced. In this connection, the conditions of the neighbouring South American, even of the Central American, States, had to be taken into consideration, for it is there that the dark beginnings of Peruvian history first acquire form and order. The results achieved up to date in elucidating the extremely complicated historical problems are also given graphically in the special charts.

It was a matter of the greatest good fortune that Dr. Eduard Gaffron, one of the most distiguished collectors of Peruvian antiquities, most generously allowed the choice pieces of his private collection to be made use of for this work. Thanks to his sympathetic understanding, a great number of the illustrations of this volume were taken from originals in his possession which had never before been reproduced. The warmest gratitude is therefore due to him.

Hearty thanks must also be expressed to Mr. Sutorius of Stuttgart, who has most kindly permitted us to publish valuable pieces in his possession, and also to Professor Th. Koch-Grünberg, who gave free access to the beautiful Peruvian collection of the Linden Museum in Stuttgart.

From the unusually great wealth of Peruvian antiquities in the Ethnographical Museum, Berlin, only a few pieces could be made use of. In consequence of rearrangements, it has been impossible to obtain a clear, comprehensive idea of the collections; nor could certain pieces of the Gretzer Collection, which is housed there, be published, as another claim to do so had already been made. Yet, even for the limited number of pieces placed at our disposal, our thanks must be given.

Thanks are also due to the Ethnographical Museum, Munich, which owns a splendid Gaffron Collection, for permission to examine its Peruvian antiquities, and to take certain photographs; also to Professor A. Posnansky, La Paz, for some excellent pieces from the Tiahuanaco Collection he presented to the Munich Museum.

Further, gratitude must be expressed to Professor Hauthal of Hildesheim, and Professor Gretzer of Hannover, who gave the heartiest support to the work, and to Dr. Fritz Krause, of the Grassi Museum, Leipzig, for his active interest.

Similarly, Baron Erland Nordenskiöld, Göteborg, Mr. J. Jijón y Caamaño, Quito, Mr. Max Uhle, Cuenca, Mr. Otto von Buchwald, Guayaquil, and Mr. J. C. Tello, Lima, must be thanked.

In New York, great kindness was shown by Mr. Franz Boas, Mr. Pl. E. Goddard, Mr. P. Goldsmith, Mr. Ch. W. Mead, and Mr. M. H. Saville, to all of whom, chiefly for excellent photographs, warm thanks are here expressed.

The British Museum, London, completed the material for both text and plates with photographs of several valuable pieces.

Dr. E. Seler was from the very first deeply interested in the work, and wished to write part of the text himself. His regrettable death prevented this. He and his wife, Cäcilie Seler-Sachs, gave most valuable assistance by allowing the use of the rich materials, both notes and pictures, of the Seler Archive.

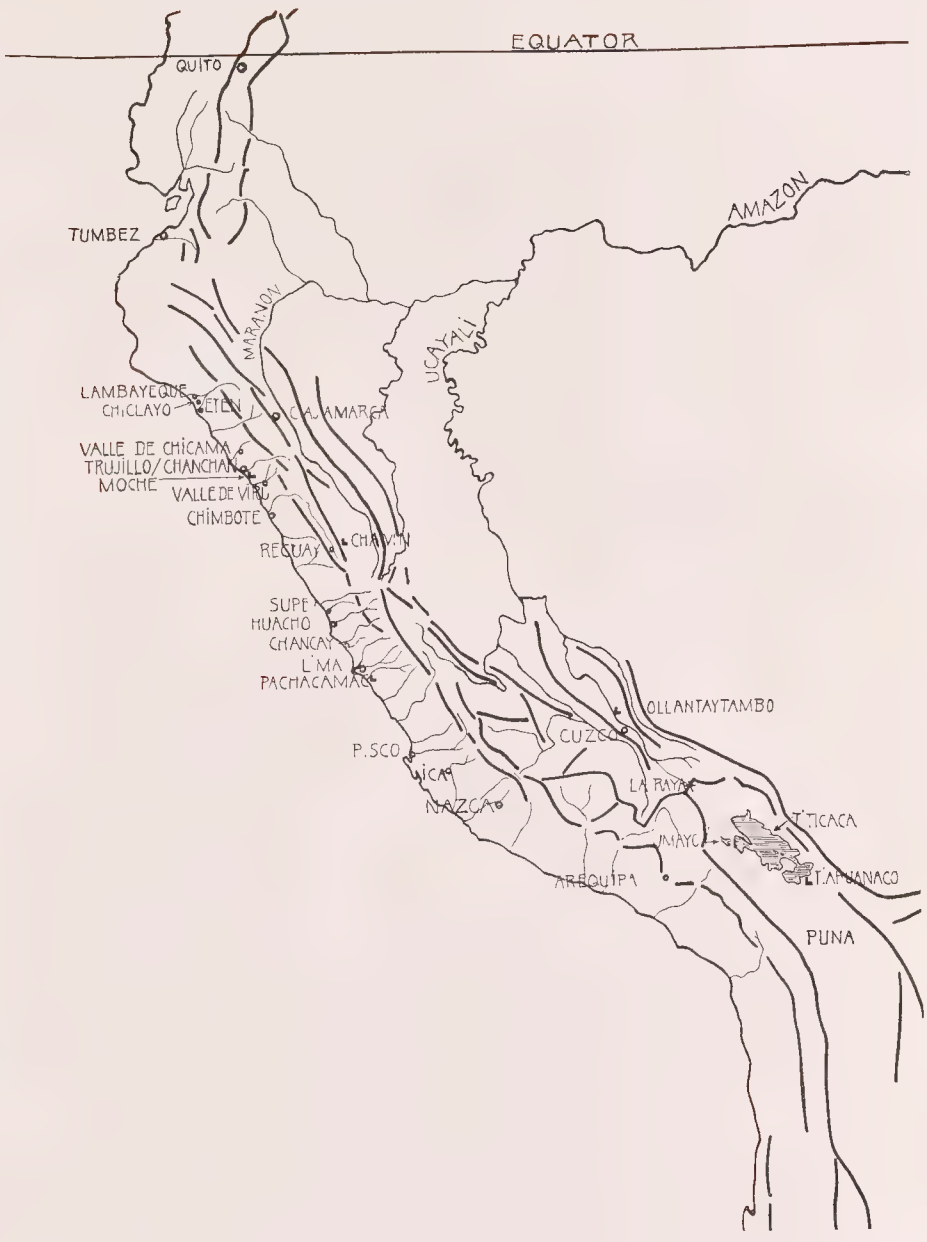
Hearty thanks must also be given to Ernst Wasmuth, Ltd, of Berlin (who, in collaboration with E. Weyhe of New York, are the publishers), for inspiring the work and for their unfailing willingness to do justice to the scientific as well as to the artistic requirements, and to remove every technical difficulty.



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Map of the Cordilleras and the coast of Peru

HISTORICAL SURVEY

I

Among the cultures of South America, certain peoples of the Cordilleras and of the narrow strip of seacoast in front of them unquestionably occupy the first place. These are situated within the sphere of Peruvian culture, whose influence, partly in successive waves, was powerful beyond modern Peru to North, South and East, but which in turn had also received fertile stimulation from other countries of South and Central America.

In 1513, Balboa, then in the territory of a Darien chief called Tumaco, heard Peru mentioned for the first time. Some years earlier, the Cazique Ponquiaco had given information regarding another sea (1), information which Valdivia (1511) did not succeed in bringing to Haiti, as he was wrecked on the Yucatan peninsula, and sacrificed, together with a great part of his ship's crew, by the Maya Indians. Thus, by a remarkable decree of fate, the origins of the conquest of the two greatest states of Ancient Ameria, of Peru and Mexico, were at first connected with each other.

From a little hill not far from the river Tuyra, Balboa (1513) saw for the first time that other ocean: the Pacific. According to Bishop Las Casas, Tumaco had told him of a country lying along the coast far to the south, with inhabitants rich in gold and pack-animals (llamas). This statement is important, because it justifies the assumption of an early sea-communication between the coasts of Central America and North Peru, which took advantage of the belt of equatorial calms, and of the passage between the currents of the North and South Pacific. As the tropical mangrove-swamps, covering the Choco coast of Columbia as far south as the river Patia, render landing extremely difficult, one can understand why old legends of an immigration by peoples from over the sea only appear further south in Ecuador and North Peru, legends to which a certain historical value cannot altogether be denied. Further, this assumption of a coastal traffic is supported by the discovery of certain Central American shells (2) in Ecuador, Peru and other countries, where they were probably a highly prized commodity, used either as ornaments in themselves, or for inlaid work in other objects, or as a ceremonial gift of the cult.

The word "Peru" itself derives from a country "Biru", whose name was given to Pascual de Andagoya on his expedition to the South (1522) as that of a land situated along the coast to the south of the Rio San Juan del Sur. The use of this word "Biru" is comprehensible from the language of the inhabitants of these shores (3).

Andagoya was forced, after battles with the natives, to abandon his march inland and turn back. At that time it was learned that merchants had come from the South to the district where the Spaniards had landed, and that further to the South lay a great, rich country whose inhabitants wore clothes.

This information induced Francisco Pizarro, Diego de Almagro, and a priest called Luque to undertake fresh expeditions on a larger scale, which Pizarro successfully crowned with his brutal conquest of Peru.

During the second expedition of the year 1526, Bartolome Ruiz, a lieutenant of Pizarro's, met that celebrated Indian bark (4) with cotton sails, which richly clad merchants from Tumbez (North Peru) had laden with merchandise consisting of beautiful wool and cotton cloth, gaily patterned with fish and birds, articles of gold and silver, bronze (?) (5) bells and mirrors. The



1. Vessel of beaten gold; Lambayeque, Gaffron Coll.; Mus. f. Völkerkde., München

Spaniards heard of a temple in Tumbez covered with plates of gold and silver, and again of llamas and of herds of these domestic animals still unknown to them.

Pizarro, who had gone to the Island of Gorgona, pushed forward, accompanied by only thirteen trusty companions, as far as the Gulf of Guayaquil, and from there to Motupe near Trujillo, where the boundary runs between the Tallan (6) and the Mochica languages. There the sights which met the gaze of the bold invaders amazed them: populous towns, tilled fields, temples of the sun with their adjoining convents. Their amazement is comprehensible, for these were the first traces of a real culture. The admired buildings were those of the Incas, who had recently subdued the Tallan-speaking inhabitants of Tumbez.

The last Inca but one, Tupac Yupanqui, had already extended his rule far into the northern coastal valleys, and the last Inca, Huayna Capac, had triumphantly penetrated beyond Quito to the most southern of the Columbian peoples, the Quillasenca, ("Moon-noses") (7), settled to the east of Pasto.

Through the division of this whole great empire "of the four provinces" (Tahuan-tin-suyu), decreed by the latter before his death, into a northern kingdom, which he left to his favourite son, Atahuallpa, believed to have been illegitimately born in Quito, (8), and a southern one, which he left to his legitimate son Huascar, the fate of Peru was sealed. For the ambitious Atahuallpa desired to rule over the old Inca kingdom as well, and made war against his brother, who was overthrown and taken prisoner in the neighbourhood of Cuzco.

At the same time as Atahuallpa became ruler of all Peru, King of Quito and Cuzco, the Spaniards invaded the country, killed, on August 29th, 1523, the Inca who just shortly before had had his brother executed, and conquered, amidst inner dissensions, the greatest state brought forth by Ancient America.

Countless treasures were destroyed by the Conquistadores in their savagely destructive greed of gold. But the soil of Peru, especially the dry, sandy coast, though ever more plundered by treasure-hunters than scientifically explored, is so extraordinarily rich in graves and ruins that a vast wealth of antiquities of all kinds has been unearthed which now form one of the beauties of the museums and private collections in the Old and New World.



2. Golden beard tongs; Coast; Sutorius Coll., Stuttgart

II

A survey of these remains as regards their significance for the history of art is an urgent necessity. Such a survey can only be made, if at all, by an application of archæological principles and methods. But the archæological classification of the discoveries made hitherto offers great difficulties as the history of Peru is unfortunately neither so rich in documentary evidence nor elaborated in such detail as that of Mexico. As far as one can judge today (9), neither the calendar nor the hieroglyphs used for the preservation of the traditions, was as highly developed as by the Mexicans and Maya Indians. Similarly, the obviously well-populated pantheon has only come down to us in a most fragmentary and incomplete con-

dition. Any attempt, therefore, at an interpretation of the numerous and clearly mythological representations, especially on the vases and tapestries from the Trujillo district, would still be premature.

The documentary sources of the history of Ancient Peru refer chiefly and one-sidedly to the highlands, and deal, almost exclusively, with the deeds of the Inca dynasty, who, in order to set themselves in a more brilliant light, were distinctly interested in veiling the remoter past.

Archæology, on the contrary, furnishes evidence more for the coast of Peru than for the highlands, but is still only in its infancy. The epoch-making excavations of Max Uhle, especially on the site of the Temple of Pachacamac, an old sanctuary and oracle in the Irma valley near Lima, were the first definitely to prove the existence of superimposed cultural strata (10), such as I established for Mexico near the great Pyramid of Teotihuacan in 1909. Of particular importance, moreover, was the discovery in Pachacamac of earlier, pre-Inca strata, and the presence in them of art-remains in the same severe style which appears in its primal force in the ancient and venerable ruins of Tiahuanaco (to the south-east of Lake Titicaca).

Pachacamac, the "Creator of the Universe" (in the Quechua language), believed to be a brother of the sun (11), was held to be even more powerful. The inhabitants of the valley, ruled over by the energetic Cazique Cuismancu, opposed the introduction of the Inca sun-worship on the grounds of the greater power of Pachacamac (12), who had given them the nutritive plants (13).

This suggests the moon-nature of Pachacamac which will be still more clearly established later when considering the discoveries in the Temple of the Moon at Moche. Moon-worship is specifically reported of the Indians on the coast at Pacatnamu (Pacasmayo) (14). The similarity in the plan of the temples which are surrounded by graves in both Pachacamac and Moche (on the south shore of the river Trujillo), speaks in favour of an ancient, popular, pre-Inca moon-worship on the coast. Further, certain frescoes in Pachacamac recall representations of the Chimu culture, and a part of the mythical vase designs of Moche are related as regards content with the polychrome Nazca pottery, which in turn is reminiscent of the featherserpent motive of Mexico.

The moon temple (Si-an, "Moonhouse") of the northern coastal tribes mentioned by Calancha may justly be considered as the complex of the ancient buildings in Moche, known by the names of "Huaca del Sol" and "Huaca de la Luna".

The temple of the god Pachamacac was so important that during the Inca period also it was exempt from taxes: the oracle there was even consulted by the Inca. The figure of the god stood in a dark room (15) of the innermost sanctuary, in which the high priest dwelt, but which was inaccessible to the laity.

In Pachacamac there were three main buildings: the ancient Pachacamac temple itself, an Inca Temple of the Sun, and its adjoining convent. At the foot of the Pachacamac temple, originally smaller than it became later, the dead were buried not only in pre-Inca but also in Inca times. Later, the old graveyard was built over when extensions of the temple were undertaken during the rule of the Incas. Here Uhle found Inca pottery in the Cuzco style, together with fragments of a black, pressed, decoratively modelled pottery in the late Chimu style, as known, for instance, from Trujillo and Chiclayo. In the lowest



3. Silver knife with bird and snake in gold



4. Drawing on a clay vessel from Pachacamac; Macedo Coll.; Mus. f. Völkerkde., Berlin. (Copy by W. v. d. Steinen)

stratum he unearthed clay vessels and tapestries of the real ancient Tiahuanaco style, and at a higher level, above the old graveyard but beneath the later extensions already mentioned, fragments in the so-called Epigonal Tiahuanaco style. In the Sun temple of Pachacamac he discovered the mummies of sacrificially strangled women, with the cord still round their necks, and pointed conical amphorae of the Cuzco style, which is characteristic of the Inca period.

Besides this Uhle found under the pavement of the lowest eastern terrace of the Sun temple, in the oldest wall, fragments in the Chancay style, valuable from the ethnological point of view. This style is also found in the graves of a primitive coastal people to the north of Pachacamac, on great broken urns, which possibly were taken from the graves of inhabitants at a higher stage of development. The fragments are decorated with geometrically conventionalised zigzag snakes, arranged alternately in a triangular pattern within a broad painted band below the short neck of a large but still primitive urn. As Uhle further discovered, in the mounds built of rounded clay masses, which he considers the oldest, the coloured pottery of the naturalistic and symbolising Nazca style, he unites both styles, the naturalistic and the geometrical, under the name "Proto-Lima", and places them together with the polychrome Ica (Nazca) in one group. A Nazca ware, which Uhle considers to be of later date, is found in Nieveria near Lima, and might be classified as Nazca-Epigonal. But according to Uhle, Proto-Lima, although appearing together with Tiahuanaco vessels in the same stratum, belongs to an earlier period.

III

In order to make more comprehensible this problem, complicated by a style-terminology known only to specialised students, we must interpolate here a few general observations.

The geometrical patterns of Peru on the one hand, the naturalistic and symbolising paintings or drawings of the Nazca (polychrome) and Moche (two-coloured) vases on the other hand, are not derivable the one from the other. The relationship between them from the ethnological standpoint is rather that naturalistic representations, whatever thoughts or intentions gave rise to them, may exist quite independently of geometrical ornament. It must further be borne in mind that what is for us geometrical has quite a different significance for the aboriginal, because he reacts differently to the pattern. He interprets the geometrical in terms of life and naturalism.

It would not be surprising if a pure naturalism was the beginning of all human art. Such a view would be supported by the prehistoric wall-paintings in the caves of Altamira, frequently compared with the paintings of the Bushmen, which belong to a comparatively late period.

Primitive man lives in such intimate dependence on nature that it completely dominates all his feelings, thoughts and desires, and keeps his excitable, impressionable soul in perpetual movement with immediate vivid experiences and impressions. This peculiar spiritual attitude, which I had an opportunity of observing among the Indians of Nicaragua, becomes active with instantaneous effect in the presence of natural phenomena, which would be trifling in our eyes, and, above all, before animals. It makes for a release of the tension between impression and total reaction, and creates an urgent need to preserve the experience in some artistic form.

A woman of the Miskito Indians, who was once accompanying me, met a snake. Immediately she turned back and wanted to make a necklace with the snake design.



Such a manner of thinking throws light on the mysterious nature of the oldest forms of totemism, which later developed into a system controlling the most divergent spheres of social activity in private and public life.

The artistic form of an experience depends to a large extent upon the material in which it is expressed. Before the discovery of the primary crafts, plaiting, weaving, and pottery, the creative impulse was restricted to painting, drawing and carving.

The living coloured animal pictures of Altamira, the naturalistic bone-carvings of Ancient Europe, are the product of emotionally-coloured first impressions.

Was it possible after the invention of the mechanical handicrafts to express personal experiences in mats, baskets and vases? Scarcely: for here the inherent law and regularity of the prescribed medium hindered a purely naturalistic style. It is much more difficult to introduce an animal as a pattern into a piece of plaited work or tapestry than to make a plaited doll of a whole animal in three dimensions.

If one had not chosen clay, stone and wood for sculpture, which is quite as old as naturalistic painting, but which, on account of the difficulty of the material is far from possessing anything of the same freedom and ease in execution as painting, an untrammelled naturalism would have been altogether impossible in the mechanical crafts. On the contrary, plaiting, which, with net-making, was a forerunner of weaving, involves the development of linear and primary geometrical patterns, which appear of themselves in their simplest form.

The early naturalistic style of the pre-cultural period, which springs from immediate observation of nature, I call "physiomorphous"; "technomorphous" the style which has been conditioned by the handicrafts of the cultural period. In both cases the objects are represented as they are with the greatest possible accuracy.

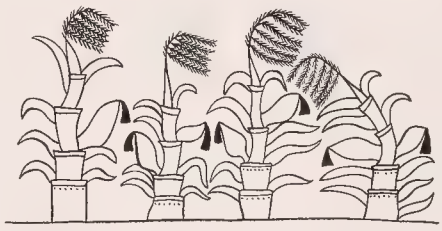
At the beginning of a cultural period, style may develop either naturalistically or geometrically. The essential idea of the cultural styles may take either a physiomorphous or a technomorphous form. The material creations in the "Fundamental" style (the style which first appears after the primitive period) are derived from these primal forms.

The physiomorphous style is already exemplified in painting, carving and sculpture at the primitive stage. The mature naturalistic style of a fully developed culture is "physiogeneous". In Peru such a style is to be found in the elaborate drawings and paintings of the pottery of Chimu and Nazca. Nature is represented, not as she is, but as she is conceived. The forms are no longer those of nature, but derived, conventionalised forms.

The primitive craft of bone-decoration delighted in circles and rings, and also supplied patterns which were later applied in pottery. Similarly, the mesh-work of nets was not without influence on vase-ornament, and might help to explain, in combination with the very ancient craft of spiral-plaiting, the appearance of curves and spirals. Net-making was probably also important for those filet-like fabrics from Ica, characterised by horizontal and vertical interlacings of the warp and weft.

Geometrical line patterns imitating exactly on pottery plaited forms — an earlier stage may have been that real plaited wicker-work was pressed into the clay — will be termed "plectomorphous". Derived patterns in different combinations, which all tend chiefly towards an alternate arrangement on account of the technique of plaiting, are "plectogeneous". They supply a great part of the geometrical patterns.

A pattern when taken from one craft and applied to another always alters its form to a certain extent. Geometrical patterns, painted on clay vessels, lose their severity and become freer; but they retain with great persistence the inherited basic elements. The technique of thread-making, applied to gold work, makes the ornament of the latter stiff and angular,



5. Drawing on a clay vessel from the Valle de Chicama; Private Coll. (Copy by Prof. Dr. Lehmann)



6. Kneeling warrior, clay, painted; from the northern coast; British Museum, London

as may be seen in a part of the Chibcha art, whose pottery reveals traces of the influence of a further development of the goldwork.

The strict development of the patterns, and of their application to a new material, is based formally on the unity of style as a standard and expression of an activity practised by a group. Even though free naturalism may be very old, and seems in general to be so, a combination of naturalism and geometrical patterns appears very early in all cultures. The presence of one or other style, or of both together, affords no definite evidence as to the age of the particular object.

The matter would be simple if it were a case of either the one or the other. But both styles, the naturalistic and the geometrical, interpenetrate and blend into each other. This is especially the case in Peru.

If a naturalistic motive is transferred to plaited work or tapestry, it must adapt itself to the laws of the new medium. Free flowing curves must become straight lines; eyes become rectangles or squares and so on. Such variations of natural designs I call "secondary geometrical". As the paintings which would correspond to the Altamira physiomorphous examples are missing in Peru, and naturalism (for instance of Nazca) was already mature and fully developed, this Peruvian style cannot be regarded as physiomorphous. It is physiogeneous. Its earlier antecedents are not yet known. Should it have originated in Central America and Mexico, its antecedents must be sought further back there.

The ever active imagination of the man of that period did not see, as we do, in the sober, dry, plectomorphous and plectogeneous line-forms merely rectangles, crosses, triangles and so on. He interpreted them differently, poetically, and they became for him eyes, ears, mouth and nose, human and animal figures, heads of fish, snakes and so on. Following this conception, which free naturalism in painting furthers — indeed is the principal cause of — there develops a naturalistic interpretation and remodelling of the geometrical patterns, whose forms are so meagre and scanty compared with the wealth of nature. This is a secondary naturalism on a primary plectogeneous-geometrical basis.

It is extremely difficult to decide whether any given specimen offers an example of a geometrical conventionalisation of a free naturalism, or a naturalistic treatment of geometrical severity. The geometrical pottery and tapestry of Ica, however, reveals so unmistakeable a development from the plectomorphous to the plectogeneous and to the secondary-naturalistic, that the origins of the geometrical pattern must be here, especially as the engraved pottery of a shell-heap in Ancon belongs partly to the plectomorphous stage. The artistic activity of a given cultural level, which has risen technically, by plaiting and weaving, above the condition of primitive barbarism, has the possibility, not to say the imperative need, of expressing itself along both physiogeneous and technogeneous lines. One or other direction may be emphasised, or both may be employed together. The inner natural disposition towards one style or the other, latent in a culture in germ, conditions the idea of its style (Protogon). It is, as it were, the immanent idea of that which renders characteristic the artistic creations of a cultured people. The peculiar manner in which each culture embodies the formless possibilities of its being, gives its style a peculiar stamp, which individual genius creates for itself during the period of great cultures, such as the Greek or the Renaissance. That is why the works of the most primitive periods are often so strikingly alike, while the works of the individual artist are different. In the first case, the people or tribe is the bearer of the idea, in the second, the historical personality whose name is even frequently preserved.

As soon as the idea appears embodied in a concrete form, it belongs to time. Cultures, the living organisms incorporating an idea, develop at different rates; they are born, bloom and decay. The eternal element in them, the soul of the culture, is the Protogon.

As the plectomorphous pattern in Peru is the oldest ethnologically and also apparently archæologically, it might be assumed that the mature naturalism of Nazca of the polychrome frescoes in Pachacacmac and of the delicate two-coloured Chimu pottery did not develop in Peru by itself from unknown origins, but arose as a result of external influences. This question will be dealt with below.

The protogonal stylistic possibilities take form in the Fundamental-style with all the fresh energy of a young culture: 1) in a free or geometrically conventionalised naturalism; 2) in a plectogeneous-geometrical style, conventionalised and transformed into the secondary naturalistic; 3) in various combinations of both styles.

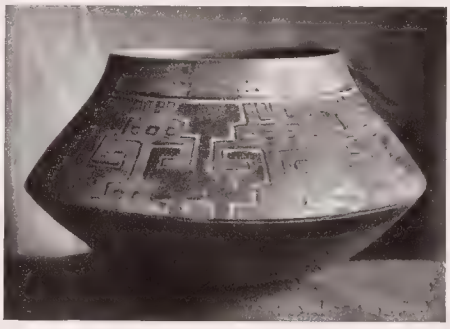
The originally naturalistic paintings and drawings which were at first not due to decorative intentions alone (17), but which expressed wishes and images of strength and fertility, of attraction and repulsion, gradually came rather to emphasise separate features of the represented object as attributes, than to depict the whole in a naturalistic way. Thus the naturalistic element in them recedes more and more, and the symbolical associations become more important. In these symbols, as for instance in the head trophies, in the rain-bringing animals, the cultivated plants, the animal disguises (18), lies a certain hieroglyphic significance, which can only be translated with the greatest difficulty into the words of our mode of thinking.

Mythical images dominated the thinking of that time. In mythical thinking, associations are possible which are incomprehensible to later, more abstractly thinking generations. Both kinds are related to each other as fairy tales to science, astrology to astronomy, popular cures to medecine. But the mythical associations, though emotionally-coloured and intuitive, are not without inner connections, being united by common tertia comparationis; they are by no means illogical in their way, though pre-logical from the standpoint of a scientific, abstract logic.

While totemistic thought, dominated by the impression of the immediate experience, is merely the beginning of an attempt to attain parts of a conception of the world from the embarassing wealth of natural phenomena, mythical thought welds the experience of many generations into a more or less complete but systematic and unified conception of the universe. In it, moon-worship plays an important part for reasons which I shall develop in another work.

Priests and schools of the most ancient wisdom of the temples, with their esoteric doctrine, had preserved the results of their observations in myths, and had created complete cosmogonies. This content is reflected in the mythical figures which mark the culminating point in the development of Nazcan art. Here we see the natural motives recede before an almost boundless wealth of symbols and attributes, fused into an artistic whole by an admirable inner harmony. Representations of this nature suggest hieroglyphs (19).

I call the symbolical style which deals with priestly wisdom and art, the hieratic. Peru illustrates it above all in the archaic reliefs of the Gate of the Sun in Tiahuanaco, in the mythical beings of the Nazcan pottery, and in the representation of wild demonic figures of Chavin. Developing through the archaic period, the art of Peru attains a classical perfection in the dignified creations of the Cuzco style. Sparing in colour, ornament and relief decoration, its peculiar charm lies rather in the noble, spiritualised form of the amphorae, bowls and cups than in the significance of the objects represented.



7. Clay vessel from Ica; Mus. f. Völkerkde., Berlin; see text p. 14



8. Drawing on a clay vessel, from Trujillo district; Mus. f. Völkerkde., Berlin. (Copy by W. v. d. Steinen)

For the period of decay in the different styles, I use the term "Epigonal", which Uhle introduced in the archæology of Peru.

The great, highly individual portrait heads of Chicama, probably prepared from smaller clay heads, owe their origin to the powerful impulses of a new age, which brought forth a generation of strong commanding personalities such as the Incas. Comparing them with the earlier head-jars, one is tempted to consider the unusually individualised Chicama heads, whose stirrup bottle shape is obviously of quite secondary importance, as the products of a Chimu Renaissance (20). If these portraits which in no way appear archaic, were really much older, the Trujillo district must have begun early with an astonishing skill in the art of modelling. This is not impossible, but is highly improbable.

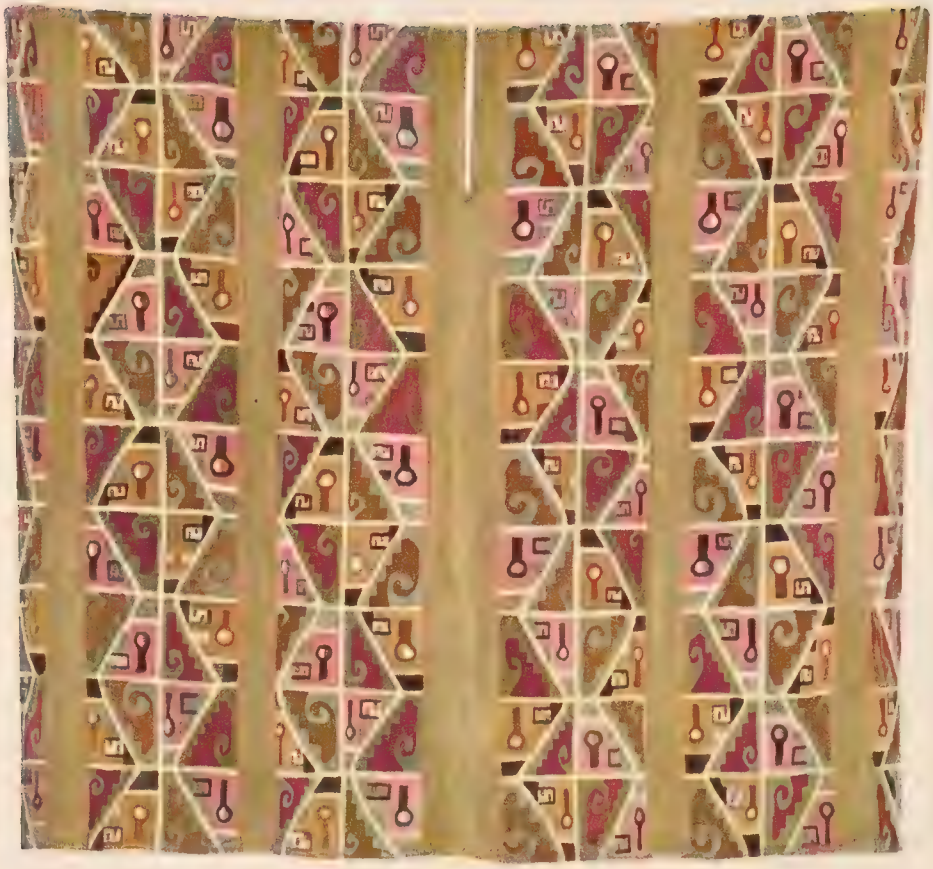
IV

A superficial comparison of the antiquities of Tiahuanaco with those of the coast reveals striking differences in artistic treatment. The severe line of the Tiahuanaco ornament contrasts with the gracious freedom and gay wealth of colour of the Nazca paintings, though both employ practically the same palette. Chimu is remarkable for modelled pottery, developed to coarse, perhaps ritual obscenities, and rich, two-coloured drawings in the conventional, naturalistic and symbolical styles. From the coloured human heads of Moche found in the Huaca de la Luna and the finely worked figures of prisoners from the Huaca de las Estrellas runs a line of development to the intensely living portrait-heads of Chicama. While Chancay remains almost primitive, Nazca subordinates sculpture and modelling to a gay, luminous painting. Both modelled pottery and painting blend harmoniously in Nieveria and Pachacamac. The unique heads of the Gaffron collection, said to have been found in Nazca, unite plastic impressiveness and strength with colour, and are thus connected partly with Tiahuanaco, partly with Nieveria (21), partly with the heads and head-jars of Moche. Compared with the later Chicama portraits, the Nazca heads appear archaic, with that severe, full-face view which Schäfer has established as one of the art-principles of Ancient Egypt. They must, however, be considered later than the head-jars of Moche, and are related to Tiahuanaco by their occasional face-painting.

Liveliness in form and colour is the characteristic of the coastal cultures, dignified severity that of the highlands.

Herein may be seen the geographically conditioned development of differently gifted racial souls, to which broadly corresponds an anthropological division into dolichocephalic and brachycephalic races (22).

The harsh climate of the southern highlands, the Puña, with its ponderous surrounding mountains and appalling snowstorms, makes the soul of the inhabitants serious and lonely. At the same time, such an environment creates particularly favourable conditions for the rise of



a sun-worship (23), as it finally appears in the already somewhat purified conception of the universe of the Incas on the Cuzco plateau (24).

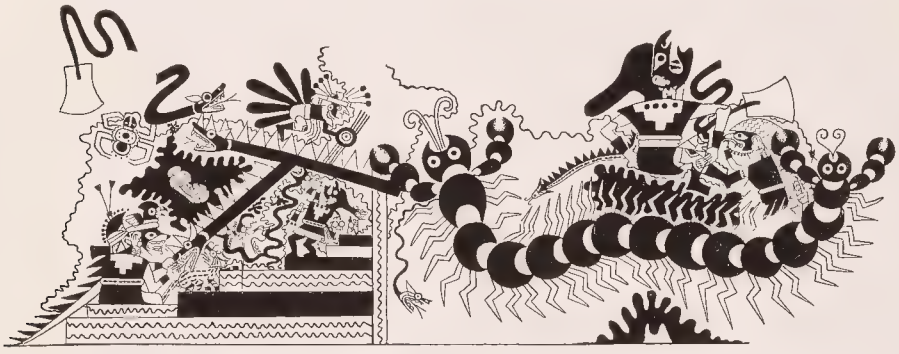
On the other side lie dry, desert-like strips of coast, with fertile valleys, in sight of the restless sea, whose inhabitants are devoted to moon-worship.

From the standpoint of mythology and of the history of culture, it is of great importance to note that the observation of the apparent course of the sun gradually compels the assumption of two sun deities: one for the daily sun, one for the yearly sun. Between these two, lunar reckoning is inserted. This result of my investigations makes more comprehensible the myths of the Peruvian pantheon, as far as they have been preserved.

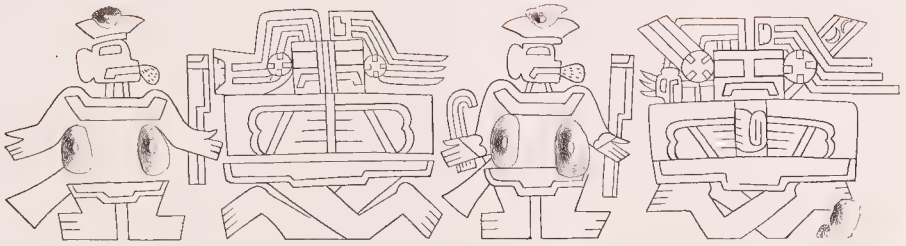
The most ancient veneration of the warmth-giving daily sun, embodied in the strange being, Conn, whose name is probably related to the Quechua word "Coñi", "warmth of the sun", or at least would appear so from the Quechua standpoint, seems gradually to have given way in the Andes to a sun-worship based on the observation of the yearly sun. Similar earlier conceptions of a yearly sun-god are suggested in the myths of Vichama (24) (Villama), which recall in some of its details the Quiché legends of Guatemala, and a Mexican myth of the sun-god Pilzinteotl as related by Thevet (25).

As ethnologically lunar reckoning occupies a position between the observation of the daily sun and that of the yearly sun, it is clear that the divine figures representing these three principles fight for mastery only where the astronomical solar year had not yet been definitely established. This applies particularly to the Inca culture, as there an essentially lunar calendar, based on nights and lunar months, had remained in use. Ritual peculiarities, such as were observed by the Inca ruler in the Coricancha or Inticancha (Gold or Sun court) in Lower Cuzco, and the ancient statements about stone observatories to determine sunrises and sunsets, suggest at least an empirical knowledge of the solar year (26). This is supported by Betanzos, who ascribes 360 days to the year of the Quechuas, while Acosta even reports an Inca year of 365 days. The exact information of some ancient authors with regard to the observation of solstices and equinoxes by means of stone pillars and of the Intihuatanas in Cuzco, Pisac, Ollantaytampu etc., involves some conception of an astronomical solar year. That this would be measured by lunations is a mode of transition from the old lunar to the solar year which is common amongst many peoples.

The ancient word for sun is "uillca", taken from the Aimara. Perhaps "Inti", originally the personal hawk-idol of the legendary first Inca, Manco Capac, has to be understood as "yearly sun", and this afterwards became the name of the sun-god, just as "Tarapaca", "Eagle", is also one of the names of Viracochan according to S. Cruz Pachacuti. In the account of Fray Pedro Simon Conn disappears before Pachacamac coming from the south, whose lunar nature has been dealt with above. This would admirably suit the view that the one embodies the daily sun, the other the moon. According to Velasco, Cun, Pachacamac, and Manco Capac are three sons of



9. Drawing on a clay vessel from Trujillo district; Mus. f. Völkerkde., Berlin. (Copy by W. v. d. Steinen)



10. High relief, Lambayeque; Brüning Coll., Chidayo, Peru; drawing by W. v. d. Steinen in the Seler Archive (cf. text, p. 20)

the sun, the divine title of which was, following Holguin, "Huiracocha" (27). These were the three emanations of a more or less abstract supreme deity in the form of daily sun, moon, and yearly sun (Inti). In the Coricancha of Cuzco, as Lehmann-Nitzsche pointed out in a lecture in Munich, a plate was fixed between moon and sun which had been altered from the shape of an egg to that of a circle. This, in my opinion, would mean that originally daily sun, moon, and the first principle of both, the egg, were fixed as plates to the temple wall, and that the egg-motive, which also appears in Peruvian myth, was replaced by the new great image of the yearly sun.

The coastal population from the very beginning leaned naturally more towards moon-worship. Here the excess of heat during the day dried up the thirsty land (28), while the moon shone in the cool night, bringing dew, as the primitive mind believed, exerted a much more marked influence on the growth of vegetation than it does in our latitudes, and ruled over ebb and flood. From this, the close connection of the god Pachacamac with the sea is obvious (29).

A change in conception of the universe, from that based on the moon to that based on the sun, had been preparing in the highlands, and is linked up with the appearance of the Inca dynasty, just as in Mexico the lunar Toltec period is replaced by the neo-Toltec reform of the calendar on the solar year basis, and by the sun-worship of the Aztecs.

Among the Chibchas of Columbia lunar and solar conceptions may also be seen side by side, the former in Sogamoso, the second in Tunja. In Columbia, however, the solar conception seems to have developed in a most remarkable way. For the wild cat or tiger-cat (nimi) was an emblem of the sun, while the corresponding animal (Titi), the night-cat of Seler's latest investigations (30) might be explained in Nazca as a lunar being if it is identical with the food-bringing Pachacamac of the Vichama myth. This justifies the conclusion that among the Chibchas the sun replaced the moon as object of worship, as it is symbolically preserved for us in the great commemoration festival in which twelve persons, clad in red robes dance round one dressed in blue. Nemterequeteba, the culture hero of the Chibchas, contains the word "nem", "wild cat", and is directly called: "Xue", "sun". His companion, "Chie", "Moon", or "Huythaca", "In the House", is, like the Mexican goddess "Chantico", "In the House", the early form of the beautiful, young Mexican moon-goddess, Xochiquetzal. Further examples may be given of these by no means accidental coincidences, which will be treated later.

In Ancient Mexico, the eagle and the jaguar were the courageous animals which leapt into the fire when the sun refused to continue its course. The frequent appearance of the puma and the condor in the art of Tiahuanaco is very striking. Puma, condor, and hawk are the good animals in the myth of Koniraya, whose solar nature is clearly revealed by the fact that the moon-animal, the cunning, thieving fox (atoc), Canis Azarae, was cursed together with the skunk (zorra hedionda) and the parrot. According to Betanzos, the fox was detested, and was considered as a bad omen. A fox in love with the moon was supposed to have embraced her, and thus to have left behind him the spots on the moon. In Huamachuco, to the north-east of Trujillo, the fox was, as Arriaga relates, most highly revered. Are these strong, warlike animals of Peru already connected with the sun cult, and is the latter related to the partially solar conception of the Chibchas? Did this con-

ception arise independently, or did solar influences, which appear in the Mexican calendar after the neo-Toltec period, and are fully developed among the Aztecs, directly or indirectly bear on the Chibchas? The solution of these problems, so important for the art of Peru, requires much more lengthy consideration than can be given within the limits of this study.

V

The cultural conditions of Ancient Peru cannot be satisfactorily explained from those in the rest of South America. L. Angrand and others already had considered the possibility of Toltec influence on Tiahuanaco, a theory which J. J. von Tschudi examines with wise caution in his studies (207 ff.).

His objection to the later dating of the Toltec decadence (1050—1060 A. D.) does not stand today, as it can be shown (31) that this date coincides with the end of the Neo-Toltecs, whereas the fall of the old kingdom of Tollan must be placed at about 600 A. D., — periods which are important also in the history of the Maya Indians.

Toltec influence, however, is to be traced, if at all, less at Tiahuanaco than in the antiquities of the coastal cultures from Chimu to Nazca. Uhle compares the proto-Nazcan style with the archaic Mexican, that of proto-Chimu with the archaic style of the Maya Indians of the first centuries of our era. Ph. Ainsworth Means considers the Chimu culture to be older than the Nazcan, if only for the reason that Chimu is geographically nearer the areas of Central American cultures. I have touched upon the possibility of a bridge over Central America between the cultures of Mexico and Peru in my work on the languages of Central America (32).

In order to bring this problem nearer to a solution I have for many years past and in the course of long journeys studied closely the cultural conditions in Mexico and Central America. It was found, in agreement with Seler's researches that the culture of the Maya Indians, is, in its essential characteristics, dependent upon the Mexican, which influenced it at the main periods, the old Toltec period before 600 A. D., and the neo-Toltec period after this date. The old Toltec period is preceded by a proto-Toltec period, which begins in Mexico about fifth century B. C. As archæology has up to the present not been able to show any influence of the culture of the Maya Indians beyond Nicaragua, they can hardly have a leading part in the equatorial-Peruvian culture. No Maya hieroglyphs have been found there up to the present.

One would be much more inclined to consider in this connection branches of the pre-Mexican Chiapanecs of Mexico who had been permeated with Toltec influence, and, as Chorotega-Mangue, had in early times, at any rate before the Mexican Nicarao, wandered to Nicaragua, and whose traces I have followed as far as Santa Maria del Darien (33).

The style of Nazca is in its technique, which consists of polychrome painting with black outlining on a stucco plaster ground, and in the content of some of its representations, which deal with the mythical bringer of food, reminiscent rather of Toltec examples and trains of thought than of Chorotegan, although the Chorotega-Mangue has assimilated a great deal from the Mexican Pipil culture, or possibly, influenced directly by the Toltecs, had brought a great deal with them from their Mexican home Chiapas.

Toltec art is distinguished from Mexican by different colours. Characteristic of the old Toltec period



11. Beaten gold-work, Cerro Zapamé near Lambayeque; Brüning Coll. (cf. text, p. 21)



12. Gold figures, Cerro Zapamé near Lambayeque; Brüning Coll. (cf. text, p. 21)

is a splendid turquoise green, as I proved by pottery fragments found in excavations in the middle stratum at Teotihuacan in 1909. Green or blue was very highly prized among the Toltecs, hence their love for turquoise, nephrite, jadeite, and green Quetzal feathers. This colour is extremely rare in Nicaragua and Costa Rica. I discovered it only on finely-painted polychrome vases of the Nicarao culture which reaches as far as Guanacaste. As far as this district nephrite is often found worked, and in the rest of Costa Rica is all the more rare the further south one goes. The first nephrite to be found in Peru, of a yellowish green variety, was discovered by Uhle in a grave of the Ica valley (34). Blue-green was clearly rare and valuable in Peru also. It is finally to be found only here and there on the polychrome vases of Nazca and Tiahuanaco. On the other hand, the figured frescoes in the Temple at Pachacamac, which are unique in Peru and related in style only with certain Chimu frescoes, but of which unfortunately only fragments remain, are painted in blue-green, red and yellow, and outlined in black, or else in yellow, white and green on red. One fragment shows slaves attached to ropes with burdens, other fragments bear traces of flowers or leaves, and fishes in the act of turning. These colours and plants recall vividly the frescoes of the pyramid town of Teotihuacan in Mexico (35).

The fact that great pyramids are found on the coast of Peru also makes probable an ancient connection with the Toltec buildings, especially those of Teotihuacan.

An extremely curious relief from Lambayeque (Coll. E. Brüning) shows, according to a drawing which Ed. Seler very kindly placed at my disposal, standing apes seen from the side and cross-legged seated figures seen from the front, with head-ornament like a feather serpent, all treated in the most archaic style which recalls the Teotihuacan style of engraved, three-footed bowls and the vases with painted frescoes from Aljojuca in the Seler collection in the Berlin Ethnographical Museum. The dotted object in front of the mouth of the apes, which carry either a flag or a throwing stick in one hand, and in the other (only in the case of one figure) a twisted tool like the Mexican "Wind-hoe", looks like the degenerate symbol of song which occurs on the frescoes of Teotihuacan. One is tempted to think that the Brüning relief was subjected to old Toltec influence. Unfortunately it is the only specimen of its kind from Peru.



13. Painted clay vessels; Tiahuanaco; Mus. f. Völkerkde., Berlin

Lambayeque, which was founded according to Balboa on the Rio Faquisllanga (Rio Lambayeque, in the opinion of Brüning) by wanderers to the sea under the leadership of Naymlap, thus seems to play a special part in the history of Peruvian art and to conceal among its antiquities a hitherto unknown and very early style.

Brüning's gold finds from a burial field at the foot of the Cerro Zapamé, which were made at a depth of from 4 to 6 metres, together



with black vases and others finely painted in two colours, are also something to a certain extent quite new for Peru. The human heads in gold covered with animals' heads look like disguises of the Mexican gods, who look out from animals' heads. This type I call Naualli-like (36).



14. Painted clay vessel in the shape of a Jaguar, Tiahuanaco; Poznansky Coll.; Mus. f. Völkerkde., Munich

Another class of the gold-work of Zapamé, like the spider with eggs and feather ornament, approaches the great spider-bells from the district of the Quepo and Coto south-east of Costa Rica, which I have collected for the Berlin Ethnographical Museum. They are Columbian in type. The Zapamé spider shows further the head ornament seen in the textiles from Ancon and Pachacamac, as also on figures related in type in the stucco-patterns from Chanchan. This head-ornament recalls the Toltec forms of the clay figures of the middle stratum of Teotihuacan. The Zapamé sheet-gold objects, however, with their representations of fishes or divers for mussels point on the one hand to the stucco-patterns of the "Arabesque Hall" at Chanchan, on the other hand to the woven and painted stuffs of Pachacamac, of which Max Schmidt gave illustrations in the Bæssler Archive.

It is an open question whether by way of Central America, Toltec influences, direct or indirect, reached South America. In an attempt at a solution one must keep in view three successive waves: the Proto-Toltecs (with Izalcos in Salvador), the old Toltecs (Pipil in Guatemala and Salvador), and the Neo-Toltecs (the Nicarao in Nicaragua and Guanacaste) (37). Of these the old Toltecs have a lunar conception of the universe, while the change to the solar conception which followed the Acatl reform of the calendar in Cholula, appears among the Nicarao. To these waves would correspond in South America: Proto-Arawaks (Caquetio), Proto-Chibchas, and old Chibchas.

The Proto-Arawaks, who penetrated north with the cultivation of the hylaic manioc plant far into Central America and in the tracts of virgin forest on the Atlantic slope, and the western branches of the Chibchas who followed them, less far north, with the Pejivalle-palm, doubtless received there the maize bred in Central America and Mexico from the wild stock (Teocinte) and spread its cultivation in South America. While excavating in Guanacaste and on Solentiname islands I have come across fragments which show a great similarity with some of the finds made by Nordenskiöld in East Bolivia, where Arawaks (Chané), Guarani and Aimará all met; Proto-Arawaks and western branches of the Chibcha could carry the achievements of Toltec culture to South America and there spread them.



15. Figures cut out of sheet gold, Cerro Zapamé near Lambayeque; Brüning Coll. (cf. text, p. 21)

Columbia's culture, built upon that of Proto-Arawak (38) (Caquetio), lies near enough to Central America to have received germs of Toltec culture, fairly directly by way of the mountains, perhaps through a simultaneous adoption of maize. The difference in point of time between bearded (39) civilising gods of the Quetzalcoatl type like Bochica and Nemterequeteba, who stayed in the country $20 \times 5 \times 20 = 2000$ years, and $20 \times 70 = 1400$ years, and who therefore embody the age of the culture, corresponds in the most striking way to the difference of 600 years between the oldest culture of



16. Double vessel (Chifiador) of clay, Valle de Chicama;
Gaffron Private Coll., Berlin-Schlachtensee

Mexico, of about 429 B. C. and the golden age of Ancient Tollan, about 200—300 A. D. which declined in 600 A. D. Mexican influence may be clearly traced in the Chibcha mythology (40). Chibcha culture with shaft graves had, travelling up the Cauca and Magdalena rivers, spread itself southwards as far as Ecuador, where it was defined as Pozoculture by Jijon y Caamaño, partly connected in the most interesting way with mounds (Tolas) which were common in Ecuador down to the 16th century (41). The Arawak type of these mounds as such may be older than the shaft graves. The gold spider of Zapamé reveals Chibcha influence. Among the gold antiquities of Costa Rica (in the Marx-Wiss collection in the Munich Ethnographical Museum) are "beard-removers" similar to those of Peru: the origin of both seems to be Columbia.

What is the archæological significance of the mighty pyramids on the coast of Peru, and of the frescoes found there, if they show resemblances to the Toltec culture of Teotihuacan? How is the appearance to be explained of the feather-serpent-like being of the Nazca pottery, which recalls the picture of Citlaltotonametl in the age of Quetzalcoatl, the world age of the wind, of the Codex Vaticanus A? Further, alternating line figures of animals and men of the Nazca type are found on tzapotec, three footed, finely-painted vessels from Cuicatlan (Coll. Sologuren) (44). The whistling double bottles, which are found approximately between Lambayeque and Pisco, are paralleled in two musical tzapotec pieces of the Munich Ethnological Museum from Ocotlan and Zimatlan in Mexico (45). Did Toltecs come to the coast of Peru as actual colonists, as Uhle is inclined to assume? One is then surprised by the fact that up to the present no trace has been found in Peru of the Mexican calendar or calendar dates or of the Mexican language. It is certainly true that old and Neo-Toltecs were also settled as rulers in Guatemala and Yucatan in the middle of the Maya. But there they left behind them unmistakable and numerous signs of their high culture, and Mexican words occur in the Maya texts of different dialects. May one assume that Toltecs arrived at an early date in Peru and there built pyramids but left no hieroglyphs behind them and not a word of their language? I do not think we are justified in going so far in the present state of our knowledge, and I content myself with stating the problem.

Further the Toltecs spread by the land-route and in the southern part of Central America along the drier fringe of land on the Pacific, while there is information from Indian times about sea-traffic on the coasts of southern Central America, Columbia, Ecuador and Peru. Toltecs must have reached Columbia, if at all, by the Pacific land-route over the mountains. It may be questioned, however, whether there was direct influence or whether the fertilisation with Toltec culture did not take place in the southern part of Central America by means of Ararwak and Chibcha branches successively, who sent new ideas and art-forms streaming back to their original homes in South America at a time necessarily prior to the blocking of communication by the savages of the Chocó with their poisoned arrows.



17. Drawing on a clay vessel, Trujillo district;
Mus. f. Völkerkde., Berlin.
(Copy by W. v. d. Steinen; cf. text, p. 23)

As regards dissemination by coastal intercourse one would have to consider especially Chorotega-Mangue from the Gulf of Nicoya, and from Panama-Darien the Cueva. As the Chocó coast makes the approach extremely

difficult, foreign sea-farers must, like the Spanish conquerors, have first appeared south of the Chocó on the coast of Ecuador and North Peru. This is supported by traditions such as that of the landing of Naymlap. Unfortunately the riddle of the isolated Mochica language has not yet been solved. It is possible that Mangue Indians penetrated either through Darien, where a trace of them is to be found in Santa Maria del Darien, over the mountains to Columbia, or were instrumental in carrying culture to Columbia; south of the Chocó they could have influenced Ecuador and North Peru or their own culture could have been influenced by these countries. The splendid black pottery of the Chira island in the Mangue area and the later fine black pottery of North Peru give one to think. The moon animal, especially of the North Peruvian fine two-coloured ware, which appears in the gold work south-east of Costa Rica and recalls peculiar Mangue paintings, brings intercourse within the realms of possibility. The fox-like moon animal is also connected with the coyote of Mexico, and the Coyotlinaual, the patron of the guild of weavers in Mexico, on the one hand, and the god of dance, Ueuecoyotl, on the other, correspond to the Nencatoca among the Chibcha. A fox-mask comes from the moon-pyramid at Moche.



18. Drawing on a clay vessel from Moche; from a photograph in the Seler Archive

VI

The contrast between the two-coloured pottery of Trujillo and Moche on the one hand and the polychrome of Ica-Nazca on the other is great. As Uhle showed, it is more external than internal in nature. The centipede men of Moche do actually recall the mythical snake-bearer of Nazca. The centipede men of Moche have wrinkled faces and pointed teeth. Both wear a jaguar on their head as device, whose pattern of spots is repeated on their clothing. The figures face each other in a semi-circular curve. The first figure on the right of the beholder is clothed in white and at his breast shows on his shirt something which looks like a crescent moon. This decoration is not present on the second figure (left), whose clothing and decoration of feathers on the neck have black and white fields. Quetzalcoatl, the feather-serpent of the Toltecs, appears also, in Mexican picture-writing, interlaced with the centipede (46) in an olin-like manner in representations which perhaps deserve attention in this connection. The segments with feet seem to have been transformed into rays in the Chavin relief, which has parallels in Nazca representations. The latter may very well be a treatment of the emblems of the wild cat, of serpent-like nature in Seler's opinion, superimposed one above the other. Feather-serpents and zig-zag snakes complete each other and both are perhaps connected with the centipede to this extent, that these creatures are like a worm, with writhing movements and perhaps symbolise the same mythical being and stylistically derive from one original form. Zig-zag snakes and a moon animal with turned-back nose (47) are prominent in the negatively painted pottery of Recuay. The fox-like moon animal is shown together with the moon-sickle in the finely painted Chimu ware. The eight-legged spider in the Nazca pottery may also be taken as a moon animal, and is a moon animal among other peoples as well. A gold spider was found among the gold work of the Cerro Zapamé.



19. Drawing on a clay vessel, Trujillo district; Mus. f. Völkerkde., Berlin. (Copy by W. v. d. Steinen; Seler Archive; cf. text, p. 23)

In the mighty ruins of Moche, the probable centre of the old kingdom of Chimu, there is no evidence showing the fine two-coloured pottery



20. Tombak mask from underground room of the Huaca de la Luna, Moche; the three upper masks from Sutorius Coll., Stuttgart

immediately beneath pieces of the Tiahuanaco style. It is therefore not certain that this pottery is really as old as Uhle tried to show. Uhle has however by means of careful excavations shown, fairly convincingly in my opinion, that the fine clay ware of Moche and the great pyramids of Moche are of the same age. Among the antiquities occur jars moulded in the form of bearded faces, which recall culture heroes such as Quetzalcoatl in Mexico, Bochica and Nemterequeteba (48) in Columbia; further there is turquoise inlaid work, which hardly occurs elsewhere in Peru.

As the Pyramid-group of Moche is closely related with the old temple at Pachacamac, incorporated by the Incas in a later building, and as both were clearly temples of the moon, there is in fact much to support Uhle's view of the great age of the fine two-coloured pottery.

Invaluable are the finds made by Dr. Manuel Pio Portugal under the foundations of the west front of the Huaca de la Luna in a subterranean room (49). There are objects of a gold and copper alloy (anta-cori); sheet gold plates in the form of rays probably from necklaces, bells, disc-like breast-plates, a throwing-stick and a flute — all objects which are characteristic partly of Chiriqui and Costa Rica, partly of Columbia. Most valuable, however, are four masks of different sizes: (1) one of considerable size with the lobes of the ear pierced (to take an ornament); (2) one almost as big, with the ears not pierced, a round full face wearing a crown of movable little gold plates; (3) a small mask with an oldish looking face like a woman's; (4) a mask of medium size in the form of the head of an wild animal with lengthened snout, clearly a fox-like animal, with claw-armed paws of sheet gold, of which only three remain.

The inner connection between the fox-type and the moon is evident from the finely painted pottery of Chimu (see above). P. Arriaga supplies evidence of fox-worship (*Extirpación de la idolatria de Peru*, Lima 1621) in Huamachuco north-east of Trujillo. In Garcilaso de la Vega, (*Comentarios Reales IV, p. 32—35*), whose information is based on Blas Valera, it is stated in reference to the shrine of the Irma valley at Lima, that they worshipped *Pachacamac*, who is greater than the sun, also *Rimac*, (the "speaker" and god of oracle), who told them the future, but that they had not heard the sun speak; that they also worshipped the *fox* on account of his cleverness and slyness, and finally *Mamacocha* "the mother, the sea", because it nourished them with its fishes. Cieza de Leon also states that a fox or a fox-idol was worshipped in the chief temple at Pachacamac (Book I, Cap. 50) (50).

In the four masks of the moon pyramids at Moche we thus clearly have the chief gods of the Pachacamac temple: (1) Rimac, (2) Pachacamac (full moon with crown), (3) the fox-god (the sickle of the moon), (4) Mamacocha (old woman), the depth of the sea, (probably with mythological connection with the moon when it is invisible). Rimac could very well be connected mythologically with the evening star, the attendant of the sickle moon in the evening sky, while the fox-god might then belong to the waning moon. The peculiar formation of his turned-back nose and of his head-gear makes this interpretation likely for the southern hemisphere.



21. Tonalamatl Aubin (ed. Seler); cf. text, p. 23

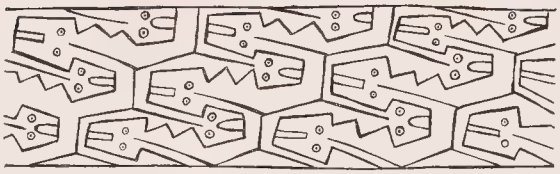
The spiritual bond which unites the coastal cultures of Chimu, Lima and Nazca, is the moon-cult. Anthro-



22. Codex Borbonicus, Sheet 13



pologically also the short-headed inhabitants of these districts make up on the average a single unit. The Chimu language reaches nearly to Ancon.



23. Zig-zag snake ornament (red and white); clay vessel from Nazca; Gaffron Private Coll., Berlin-Schlachtensee

It is not known what language was spoken further south. Quite in the south live the primitive Uro, whose language is not Puquina; they are perhaps related to the Chilian Chango. The question of the Uro belonging to the Arawaks has not yet been cleared up. Uro and Chango are separated by the Atacameños, who have a special language, to whom together with the Chincha Uhle ascribes special influence upon the birth of the Cuzco culture, and who are connected with the Diaguite culture of North-west Argentine. The protogonal possibilities in style, which appear in the Fundamental Style of Peru, are differentiated in coast and highland. The coast prefers naturalism in relief and painting as well as in certain textiles of the kelim technique. The highland shows the solemn, measured, hieratic style of the archaic Gate of the Sun, to which Nestler in one fragment has found a parallel. In Tiahuanaco, where Posnansky has been making thorough researches for years, naturalism appears restrained in style and side by side with it are geometrical patterns of a plectogeneous type, mature but belonging without question to an early period (51). This is especially true for the fabrics and the pottery in which Nazca-like pieces are alo found. The treatment of the geometrical patterns and of the naturalistic representations is fairly free; they are arranged together in rows, and set next and over each other. In the epigonal period, the parts become independent; the whole is in process of dissolution, and naturalistic and plectogeneous elements meet in the same fields, in rows or one above the other, with an effect of extreme yet pleasing diversity. Thus results what I would be tempted to call naturalistic *membra disjecta* and plectogeneous quodlibets.

The restraint of the old style is perhaps not to be explained entirely as plectogeneous. The working of stone and wood may have done its share. The stone heads on the buildings of the older epoch, which was doubtless a copper age prior to the bronze age, are, as seen in the "Nouvelle Enceinte", laid bare by the French, extremely primitive and distinguishable in style from the famous middle figure of the Gate of the Sun. The naturalism and the wealth of colour might indicate Nazcan influences. Examples of work like that of Nazcan are indeed found in Tiahuanaco, as the beautiful sherd of the Posnansky Collection in the Munich Museum shows, and another fragment of which Uhle gives an illustration in his article on Ica.

The spreading of the Aimará along the coast explains itself by the extension of the old kingdom of Tiahuanaco, which has also profoundly influenced the south (e. g. Arequipa) and north-west Argentine (Estilo draconiano with echoes of Nazca). The conquerors have clearly absorbed a great deal from the coast, but have also influenced the coast themselves. This is perhaps how the wild cat (Titi) found a place in the symbolic art of Nazca (52). Although the Tiahuanaco culture actually lies underneath more recent layers there is up to the present no perfectly satisfactory evidence of the polychrome pottery of the Nazcan style and the fine two-coloured ware of Trujillo lying clearly immediately beneath objects from Tiahuanaco. On the other hand, it is to be observed that Tiahuanaco elements penetrate into Ica (Ocucaje, Acari). Epigonal Tiahuanaco motives of a restrained naturalism (wing-motives) found acceptance in the geometrical neo-Ica pottery, and old woven cloths in the Tiahuanaco style were found, for example, in Ocucaje, partly in clear relation with Chavin. The wild animal with claws which in the textile from Ocucaje (see Uhle, Journ. Soc. Am. Paris 1913) seizes a whole man by the head, is doubtless a more complete picture of what we see in an abbreviated form in the representations of the wild cat holding head-trophies like men who use their enemies' heads as trophies. In Mexican the jaguar is called in so many words 'te-qua-ni' "who eats people", and the jaguar is represented with a corresponding realism on certain antiquities from Costa Rica in clay and metal.



24. Sitting, white-bearded man; clay; Valle de Chicama; Gaffron Private Coll., Berlin-Schlachtensee

Finally the Tiahuanaco style loses itself in three coloured (white, red, black) pottery which seems to have developed out of the epigonal style I of Tiahuanaco by mixture with the local styles of the coast. This style is found, for example, among black, later Chimu ware at Trujillo, at Jecuan (Chancay), and at Pachacamac above remains from old Tiahuanaco and Tiahuanaco epigonal I.

VII

The age of the primitive style in the dawn of history leads back, on the coast of Peru, to fisher peoples, whom Joyce, perhaps rightly, ranks with the Fuegians. The Peruvian fishers left behind heaps of shells with a remarkable number of bone tools, together with mats, baskets, netbags, etc. The engraved clay sherds from Ancon are partly still plectomorphous and partly already show plectogeneous patterns and curving lines of a style peculiar to them, which belongs to a higher stage in the history of art (53). Concentric circles, which doubtless derive from decorations of bones and are still found with a blackish filling on bone awls from Nazca, are certainly very primitive and a transitional stage to the oldest pottery of Chancay. This Chancay ware is decorated with white circles and white triangles alternating. Later Chancay has examples of the alternating zig-zag snakes which reach their full development in the oldest Pachacamac style as well as at Nazca and Ica. They appear again in negative painting together with the mythical moon-animal of the Recuay pottery; they are also seen in the Calchaqui culture, and, treated classically, in the zig-zag style of the Titicaca district (Arapa), of which Uhle gives some illustrations.

Further excavations are necessary to determine how far the primitive, original population went to compose a lower level of a much higher population, especially in the case of Central and North Peru.

The primitive level which is to be assumed as probable for Tiahuanaco is hidden in darkness. Whether it should be regarded as a branch of the Arawak or the Tupi-Guarani is questionable since the pre-historic art of the Arawaks of Amazonia and East Bolivia differs considerably from the art of Tiahuanaco (54). This is especially true for Nordenskiöld's finds in East Bolivia, in which, according to my opinion, Chibcha influences are also visible, like those which I found in the course of excavations at Costa Rica. Ica's position is peculiar. Here a distinction of origin must be made between a primitive, plectomorphous style and the later geometrical, plectogeneous, local Ica style, which has adopted Nazcan-like peculiarities, such as the single horizontal row of bosses on bowls. Further there is a free, naturalistic Ica style, which also recurs in Nazca and as later Nazcan (Nazca-epigonal) is seen at Nieveria, north of Lima. Side by side with this naturalistic Ica style which was already represented by a few specimens in the old Macedo Collection in the Berlin Museum, appear alternating zig-zag snakes which are used in Nazcan pottery, also in conjunction with naturalistic motives in separate bands.

The plectomorphous Ica style, as the most primitive beginnings of which one may regard certain engraved sherds from the shell-heap at Ancon, is to be seen in the peculiar filet work of the Gaffron Collection in the Ethnographical Museum in Munich (55).

These "fabrics" are extremely important. One sees that the patches, which are more plaited than woven, are the forerunners of the true textile with threads running through the whole length. The looping may go back to an older technique of making net-bags. Textiles of the Tiahuanaco style, also with loopings over the warp-thread, are not the only ones of their kind. We find more primitive sectional weaving in the Ica style, such as may be observed in the Ica basket-weaving work with simple, plectomorphous patterns. I agree with Max Schmidt as to the plectogeneous nature of these geometrical patterns, but I call them plectomorphous, reserving the term plectogeneous for their later developments. One should not judge the Peruvian textiles exclusively according to their technique, since different processes exist side by side in the Peruvian culture and are indeed found present in the same piece (see G. No. 1699). The style also must be considered. Now the later textiles of the Ica style with motives of birds, alternating zig-zag snakes, etc., transformed by a secondary naturalistic treatment, are executed in the kelim technique, which is characteristic for the textiles with freer representations, for example, those from Pachacamac (56). The kelim technique allows of a much freer artistic activity, like painting in weaving. Many specimens of this kind from the coast show scenes positively like picture-writing, as Max Schmidt has illustrated with splendid examples in the Baessler Archive.

The kelim technique of a loom with a mechanical contrivance for lifting the warp threads, which may go back to Llapchilulli, the companion of Naymlap, and maker of clothes and feather garments, could, if not native to South America, very easily have been introduced from Central America. In any case there is no need to consider the South Sea, as Polynesia is not acquainted with the loom, and Micronesia is, in this respect, dependent on Asia and the Archipelago. The kelim technique must be as old as the naturalistic and symbolising style of the drawings and paintings of Chimu and Nazca, which certainly cannot be younger than Tiahuanaco, since Tiahuanaco in its naturalistic work seems to be dependent on Nazca. The kelim technique however may be considered younger than the plectomorphous style, and it has taken over the old motives of the coast as well as the alternating zig-zag snake. This being so, the zig-zag snake of the naturalistic-symbolising, polychrome paintings of Nazca points back to earlier motives which were also made use of by the new naturalistic art. The wall patterns in plaster from Chanchan, which recall the textiles both of Ica and Pachacamac, show that the Ica style must have existed in Chanchan, probably in the form of textiles which were used originally as wall-hangings and later imitated in plaster.



25. Large, painted clay vessel, Cuzco; Mus. f. Völkerkde., Berlin

The technique of the plectomorphous sectional weaving from Ica is clearly of the greatest age, and most probably older than the kelim technique. But the slits of the kelim technique are also found in the Tiahuanaco style.

In the place of looping is found on the coast the more simple process of weft-turnings over the same warp thread. The result is the same, namely a strengthening of the warp.

Is one now justified in assuming a connection between Ica, which is so remarkable for



26. Crab of black and white porphyry, Cuzco; seen from above; Mus. f. Völkerkde., Berlin

its plectomorphous and plectogeneous ornamentation, and Tiahuanaco? The playing card arrangement of geometrical heads in the Tiahuanaco decoration of the Mizque valley, for example, in Bolivia (see Nordenskiöld) is certainly very reminiscent of the geometrical Ica patterns. Consequently one might imagine that Ica was an advanced post, a wedge, of Tiahuanaco in the Nazca district. Was the Nazca culture an intruder which pushed back the older, plectomorphous culture of Ica? In that case one could imagine the new culture penetrating also beyond Chavin, and there crossing with a branch from Tiahuanaco, and the Tiahuanaco Gate might represent a later type than Chavin. All the same, the wild animal claws of the Chavin relief are also to be found in a Tiahuanaco textile of Ica (Ocucaje), which Uhle reproduces.

The textiles in the Tiahuanaco style, with naturalistic and plectogeneous patterns, are not to be considered as older in themselves than the kelim textiles. The plectomorphous patch textile of Ica is the first to mark, ethnologically, a greater age than the kelims. Their patterns are purely geometrical, and as cosmopolitans, not so characteristic as the Tiahuanaco patterns. The question must be raised whether the naturalistic motives, including those of the head-trophies of the central figure in the Gate of the Sun at Tiahuanaco, did not really travel from the coast to the highlands. In that case, the geometrical style would be the only possibility of a Tiahuanaco style free from Nazcan influence, and it would be of plectogeneous, perhaps, as Ica indicates, of plectomorphous origin.

This would imply the wandering of a higher culture to the coast, for which view much other evidence is to be found. How far north the plectomorphous style extended cannot be determined. The oldest Ancon has traces of it in engraved sherds. The zig-zag snakes of Recuay, Chancay, etc., are probably a variation of a primary-geometrical pattern, which, born under the influence of naturalism, spread far and wide, even into the Calchaqui district.

The antiquities of Tiahuanaco and of Tiahuanaco style are sharply characterised. In Tiahuanaco itself it is especially the monuments lying above ground which have at all times inspired admiration. All the buildings, and the present-day Tiahuanaco, are said to be situated on a slightly elevated plain, while the surrounding land was formerly the sea-bottom. Perhaps we may conclude from this with Posnansky that the level of the sea was formerly $34^3/_4$ m higher than it is today, though Uhle has advanced reasons against this. A square of stone pillars, excavated by the French before the eastern stairway of the Calasasaya, the "Nouvelle Enceinte", lies 2,60 m deeper than the deepest of the other buildings, and, unlike them, is orientated exactly according to the cardinal points. An earlier and later architectural epoch must therefore be distinguished in Tiahuanaco (57). Antiquities are found in Tiahuanaco in polychrome clay, metal, wood and stone. For the most part these bear the stamp of an archaic, severe style. Also Nazca-like fragments are found in Tiahuanaco.

The origin of Tiahuanaco is obscure. Such a powerful culture must, one would think, have gone through earlier stages. This view is supported by the geometrical elements of style, which are in single examples still almost like plaited work, as on the great engraved vessel of clay from Lacaya, now in the Berlin Museum. Tiahuanaco seems to have received its first real impulse towards naturalism from Nazca. The Tiahuanaco style proper which thus resulted was spread with the Aimará and also reached the coast where the transition to three-coloured pottery may very well have taken place. Tiahuanaco culture was also spread through Bolivia as may be seen from Nordenskiöld's finds in the Mizque valley of Quinales. The older Calchaqui culture cannot be understood without Tiahuanaco. How far the former is related to a Guarani stratum is not established.



A good part of the Tiahuanaco culture survives in the Cuzco style. The heavy Tiahuanaco bowls, however, take on lighter forms, and the painting is different and more delicate, sometimes plectomorphous, sometimes plectogeneous, sometimes more naturalistic in character. The last-named type shows in certain details clear connection with Nazca, and clay dishes in the Cuzco style with paintings like those at Nazca are found at Ica. The Cuzco ware never adopted the Nazcan diversity of colour. Characteristic are sharply-pointed, conical amphoræ of all sizes with slender necks, sometimes with human faces in low relief reminiscent of the style in Chibcha goldwork; also elegant bowls with handles terminating either in a knob or an animal's head, and generally with symmetrical painting on the bottom. The handles, except in the case of the amphoræ, are generally attached horizontally. Among the paintings fine plectomorphous and plectogeneous patterns are met with, and especially heather blossom as a motive of plant decoration; but clothed human figures and animals, especially insects, are also found. A charming peculiarity is the addition of snails and fishes in relief as in the Palissy manner. Clay bowls of a brownish colour, very powerful in style, with fishes and mouths for water jets in high relief, reveal in their strength the influence of simple or chequered serpentine stone bowls of the most masterly execution. A stone bowl in the form of a crab is matched by one from the Guëtar district of the Central Highlands of Costa Rica. How far the Cuzco culture of the Quechua was contemporaneous with the archaic Aimará culture cannot yet be made out from the tangled chronology. But so certain as it is that the Cuzco culture is built up on the older culture of the Aimará and derives from it, perhaps under Chibcha influences, so meagre is our reliable knowledge about the oldest cultural epoch. Conditions here are similar to those in Mexico, where the Aztec culture supports itself on the Toltec, while there is an old Aztec epoch which must be dated centuries before the founding of Mexico Tenochtitlan (1325 A. D.).

The zig-zag style of Hatuncolla, the capital of the kingdom of Zapana, which is supposed to have survived as the last Aimará kingdom and to have been overthrown under the second or third Inca Lloque Yupanqui, represents either one development in the Tiahuanaco style or a transition from the Tiahuanaco to the Cuzco style. The frogs in relief on one of the pillars of Hatuncolla, which are also found on the back of a Tiahuanaco stone figure and help to fix a specimen of the Munich collection of which the provenance is unknown, remind one of Chibcha gold work. On the stone pillar of the church at Arapa one sees, on a ground divided symmetrically into four fields, the alternating snake motive of the coast as well as zig-zags and crosses.

The Cuzco culture spread far to the north and south, in historic times before Quito, but even in an early age as far as Quito, as is shown by the ancient dialect.

The interesting Chibcha-Atacameño style, however, of South Peru and North Chili, which Uhle has examined, was not apparently the origin of the Cuzco style, but both it and the more crude pottery in the Cuzco style of the later Calchaqui culture originated in the Cuzco style. One must further make a certain distinction between the examples of a style found at the centres of a culture and those produced in the country, which, as provincial art, do not reach the perfection found at the centres.



27. Crab of black and white porphyry, Cuzco; under side; Mus. f. Völkerkde., Berlin

The typical examples of this in South Peru, North Chili, and North-west Argentine, where in other respects local characteristics may be recognised, are Tiahuanaco and the classical Cuzco style. If one speaks of Tiahuanaco-epigonal, one may also talk of Cuzco-epigonal and Nazca-epigonal, and in fact these branches of style are found.

The Chullpa-colla period, to use the term given by Bandelier and Uhle, which with its round grave-towers of stone, widening out towards the top (e. g. at Sillustani), characterises the art of the Aimará district, is considered



28. Drawing on a clay vessel, Trujillo; Gaffron Coll., Lima. (Cf. text, p. 31)

to form the transition from the Atacameño zig-zag style to the Inca style. Uhle makes the Chibcha and the Atacameño period replace the Chullpacolla period (Bolet. Acad. Nac. de Hist. Quito No. 2, 1920, p. 215). Many of the illustrations which Uhle gives (Bolet. Soc. Ecuat. Estud. Hist. Am. III, No. 7—8, Quito 1919) of the style of this period, remind one strongly of a cruder Cuzco style which was practised there no doubt as provincial art following on the Tiahuanaco style.

VIII

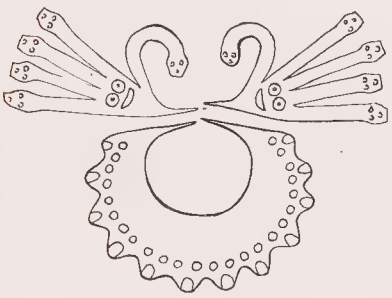
The polychrome pottery of Nazca of the naturalistic and hieratic styles, distinguished for delicate gradations of colour is extremely rich in the representation of figures. Geometrical patterns had already been treated earlier in the Ica style (zig-zag snake pattern). There are also found simple, freely treated line patterns and simple step patterns of exquisite taste. The naturalistic paintings may be arranged in three groups: (1) conventionalised, mature representations of animals and plants; (2) bearers of plumed staves; (3) mythical beings.

The animals include: wild cats, monkeys, mice, guinea-pigs (?), condors, birds with crested heads, arctic birds, long-legged and aquatic birds, pelicans, night-swallows and the very similar maize-birds, colibri (as flower suckers), lizards, snakes and double-headed snakes, tadpoles, young tailed frogs, frogs and toads, further seals and sea-monsters, sword-fish, fish, flying-fish and fish in nets, crabs, amphibia, and water-beetles.

Among the plants are to be noticed bean-pods and ripe beans (58), tubers from vegetables, young maize heads (like night-swallows and maize-birds), ripe maize heads, peppercorns, ripening fruits of palms, fruits like tomatoes and cactuses.

Among objects the following should be mentioned: arrows, slings, throwing-sticks, spades and head-trophies (similar to the Tsantsas of the Jivaro-Indians and to the Mundrukú heads) with the lips sewn together with thorns. Actual human heads as trophies were found in Nazca. Dr. Gaffron possesses one and similar ones have been described with drawings, by Tello. These head-trophies, which are familiar in the Tiahuanaco style, but not in the Cuzco style proper, seem to be connected ethnographically with Arawaks and Tupi-Guarani (Mundrukú). Prepared heads are reported to have been found even in the Chocó. Heads as trophies are also known in the Mexican culture area. Further there are examples among the painted heads of Nazca which almost remind one of the Xipe-masks of men flayed, masks of a cult which flourished in Nicaragua among the Maribios of Subtiaba who are akin to the Yopi-Tlappanecs.

As has been said above, the purpose of the representations of plants, animals and head-trophies must not be thought of as purely decorative. Holding the head-trophy in the hand, one absorbs the strength of the slain man. The paintings of the colibri are perhaps connected, as in Mexico, with the desire for relief from the heat of the sun. It was a belief in Mexico that the colibri was dead during the dry season, but reappeared with the rains. A clothed figure of a colibri resembles outwardly the national god of the Aztecs, the sun-god Uitzilopochtli. The appearance of condors and cat-like wild animals in the Nazca pottery and still more in the Tiahuanaco style and in the Coniraya myth reminds one of the Mexican conception of the eagle and the jaguar as the animals of strength.



29. Golden mouth and nose ornament, Nazca; Gaffron Private Coll., Berlin-Schlachtensee

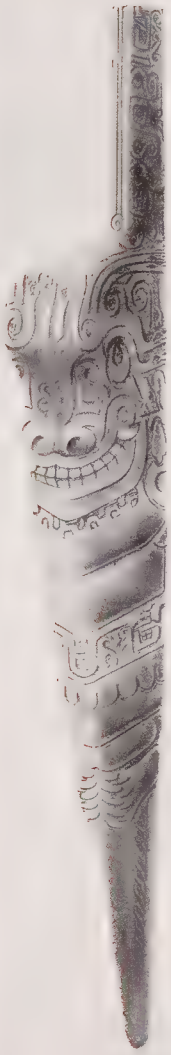
The hieratic style of Nazca has more the character of picture-writing. It shows first of all persons similar

to the bearers of feathered staves, with the mouth painted in profile, the eyes full face. On other vessels are seen dancers with parrots on a pole, or with a throwing stick in the right hand and arrows or a string of pearls in the left. The string of pearls is also found in the Tiahuanaco style. The head ornament consists of a pointed cap and strands of hair. Ethnographically remarkable is the loin-cloth dress with two tassels hanging down behind. One specimen of the Gaffron Collection in the Ethnographical Museum at Munich shows the hair standing out round the head with a tonsure in the middle.

On the extremely important vases of the Gaffron private collection the bearers of feathered staves have the motion of men running. They are reminiscent of some finely painted drawings from Trujillo, which, according to Seler (59), illustrate fights between warriors of two clearly different tribes, where the more scantily clothed and less civilised warriors carry a club with a curious head, and the lower part bound round with great, stiffly projecting feathers, and a shield, and in the other hand a throwing stick and arrow or sling. Seler discovered similar fighting scenes in the frescoes of the rooms behind the Huaca de la Luna in Moche. One of the more richly clothed warriors of the Trujillo vases has a jaguar on his head just as the two centipede-men of Moche have, of whom Uhle gives illustrations. However, one of the bearers of feathered staves of the Trujillo vases has also the jaguar. It is a case therefore of more highly cultivated warriors from Moche and Trujillo with strong clubs in combat with (smaller?) tribes from the south coast carrying throwing sticks who perhaps represent a more primitive element of the population: this view is supported by their throwing-stick which is known on the Peruvian coast having been found in Nazca and Nieveria. The more highly cultivated warriors may represent the builders of the pyramids of Moche, whose age Seler thinks may not be reckoned as 1500 years. If this dating were accurate, then in the case of Moche neo-Toltec, not old Toltec influences come into consideration, and it is important to



30. Relief on a granite monolith from Chavin de Huantar; height, 2 m.; Museum, Lima. (Rubbing by Dr. F. Krause from the plaster cast in the Grassi-Museum, Leipzig)



31. Hewn granite monolith, Chavin de Huantar; height 4,53 m.; from Tello, Wira Kocha, Lam III, p. 304; cf. text, p. 35

note that in Mexican remains the neo-Toltecs appear par excellence as warriors in contrast to the peace-loving old Toltecs. On the other hand there is a great deal in the ruins at Moche which points to old-Toltec influences, so that the absolute dating of Moche is at present as uncertain as that of the coloured Nazca pottery.

The bearers of the feathered staves of the Gaffron Collection with their peculiar weapon remind one of paintings on vases which I found in Salvador and on Amapala in the Bay of Fonseca. It is very hard to make a clear distinction between these vases and the Mexican Pipil and Maya-Poton styles. The bearers of the feathered staves of Nazca have not the armless man's shirt (uncu), but a shirt with arms like the Mexican uipilli (60), and wear a loin-cloth also.

There is a unique figure on a beautiful vase of the Gaffron Collection, an ape-like creature stretched out horizontally, with star cloth and cap with scolloped trimmings. It is related to a descending being, specially diversely coloured in the same collection, which, in its turn, is connected with the mythical bringer of food represented on vases and costly embroidered tapestries. The star cloth recalls the Mexican "starenagua" (starred petticoat cloth) which is a name of the ancient sky goddess Citlalinicue.

The presentation of myths in Nazcan work may for the most part be brought back to two original forms; the spotted cat, and what Seler calls the zig-zag demon. Among the Indians of Nazca, the chief demon, the spotted cat, was bringer of food and the symbol of night, and of male sex, and this is also true of the demon in its varied forms of a bird-like being with warlike accoutrement. It would take us too far to consider in greater detail the extraordinarily diverse variations of these two chief mythical forms, which were clearly the centre of the mental world of the inhabitants of Nazca. In a posthumous work, published by his wife, in the fourth volume of his collected studies, Seler has commented in detail on the pottery of Nazca, Pisco, and Ica, and given numerous illustrations. For details, therefore, the reader is referred to this work.

The spotted cat appears first of all treated quite realistically with whiskers standing out; these are treated later independently and as symbols, either as head band or as a kind of Naualli. There is also a corresponding gold nose-ornament from Nazca in the Gaffron Collection, the form of which recalls the pattern of epigonal vessels of Ilo (61). Their use as head band and as independent emblem allows one to suppose that the faces of wild animals set one above the other over the head of the standing figure in the Chavin relief, which run out in curving and in headed rays, are connected with this cat-ornament. It is important to note that the spotted cat Titi is found precisely in the district of Lake Titicaca and on its islands, and has given rise to names like Titi-cala "cat-rock" (62). The wild-cat called by the Spaniards gato montés is termed Titi in Aimará, Ozocollo in Quechua, while the jaguar is in both languages known as Otoronco, Uturuncu.

In the *Tres Relaciones*, Polo de Ondegardo mentions a star named Chunque chinchay, which was honoured by the inhabitants of the mountain, and is a "tiger" to which the tigers, bears and lions are subject. As the onza is known among the Quechua as "chocque chinca", "excellent jaguar", chinchay is perhaps etymologically connected with chinca. The cat-demon and stars are actually shown together. According to Santa Cruz

Pachacuti chunque chinchay, "the lord of the tiger-cats", who protected hermaphrodites, was a variegated animal. This fact recalls the Mexican god, Tezcatlipoca, the god of the Jaguar Age. Among the Chibcha the wild cat is the emblem of the sun, while among the Quiche of Guatemala, Xbalanque, originally translatable approximately by the "female jaguar", corresponds to the moon hero in the Popol Vuh.

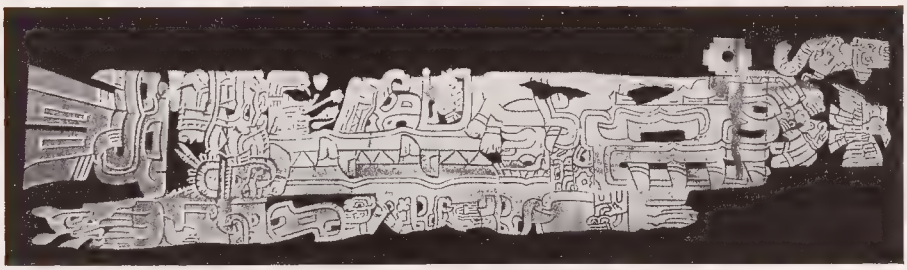
Cat-like wild animals figure very prominently in the art of Tiahuanaco, a fact certainly to be connected with the worship of the jaguar star already mentioned by the inhabitants of the mountain. The cat as wild animal is seen in the Chavin relief either standing or coming down, and in some respects anthropomorphous; it has the same form but cruder in some stone figures from San Agustin and also in gold work from Costa Rica and Chiriqui, work which has a connection with the Chibcha. The cat-demon of the Bolivian highlands could have come by way of the Aimará to the region of Nazca, there to develop an individual art-form. The spotted cat of Nazcan art stretches its tongue far out. This is to be explained from the custom of those cats to lick their kittens. Thus a vase from Nazca shows a cat licking its kitten which is ducking down. Eyes, face and front legs are drawn full on, the body and hind legs are drawn in profile, and thus form a right angle with the rest. This is a mark of early art which Schäfer has proved to be an important principle in the history of Egyptian style.

The cat also holds articles of food in its hand or with some other part of its body, such as peppercorns, beans, palm fruit or young maize heads.

The animal changes into a cat-demon, that is into a human form with an animal's head (63). On the head hair like snakes is added or else snakes hanging down on each side over the body. The demon is also shown coming down from the height after the fashion of a Mexican Tzontemoc, and as in the Mexican conception of the descent from the height from Tamoanchan, the highest heaven, the seat of duality, in which dwell the old pair of gods, the gods of nourishment, of maize. The demon has the further addition of a great zig-zag snake falling down behind similarly to the series of rayed heads of wild animals in the Chavin relief, whose relations to the centipede-man of Moche have been discussed above. A cat-demon, with warlike adornment, on a Nazca vase in the Sutorius collection, of which Seler gives an illustration (64), shows clearly the snake falling down the back of the rudimentary centipede. The strictly original type of the middle figure of the Gate of the Sun at Tiahuanaco undergoes here a modification like that of the figures in the Chavin relief, the upper and lower parts of the body being shown partly as seen from the front, partly as seen from the side. This peculiar early perspective of only two dimensions may perhaps be explained by the spacing of the picture over the curved surface of the vase, on which not only the great head with its emblematic whiskers was to be shown, but the other parts of the body also as seen from another side. Thus one reached a compound view of the whole form and fitted the two halves together on two different planes at right angles to one another.



32. Carved granite monolith, Chavin de Huantar; side view; from Tello, Wira Kocha, Lam. IV, p. 308; see text, p. 35

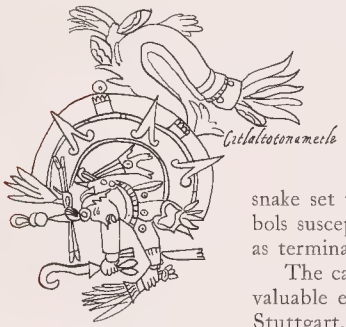


33. Relief on a granite obelisk, Chavin de Huantar; H. $2^1/_2$ m.; from Tello, Wira Kocha, Lam. I, p. 274; see text, p. 35

The cat-demon is also transformed into a bird and the zig-zag snake with the markings, which might be taken as feathers, on its centre stripe, takes on almost the character of the feathered serpent. This is in Mexico the symbol of Quetzalcoatl, the moon god of the old Toltecs. As later in the neo-Toltec period Quetzalcoatl goes out to conquer as the warlike morning star, the Nazcan myth complex of the bringer of food may be influenced by old and neo-Toltec conceptions, and symbolise in particular the cultivation of maize. The little dolls of the maize plants and maize heads on the beautiful Ica vase in Uhle (65), remind one of the myth of Vichama, whose slain predecessor gives from the different parts of his body to the god Pachacamac the material for maize and other cultivated plants. Maize is indeed in Mexican actually called "our flesh", and the Peruvian myth corresponds most closely with the Mexican as given in Thevet (66).

The feathered snake of Nazca mentioned above leads one to consider the possibility of Toltec influence on Peru. I would point to the fact that the ruler of the Wind Age, in accordance with Mexican tradition, is called in Codex Vaticanus A, Citlaltotonametl ("warming star"?). He is portrayed as a human form descending from above, looking out from a feather serpent which is set with maize heads. The similarity to the Nazcan representations is very striking. I am acquainted with the most southerly paintings of the feather-serpent from Guanacaste (67) (Costa Rica), where they go back through the Nicarao to Cholula, and are to be dated at about 800 to 1000 A. D. Certainly the Mexican name "warming star" refers to the sun. The Maize God is however, according to Thevet, a son of the sun-god and the moon-goddess, just as the predecessor of Vichama is a son of the sun, but is changed by the moon, Pachacamac, into cultivated plants.

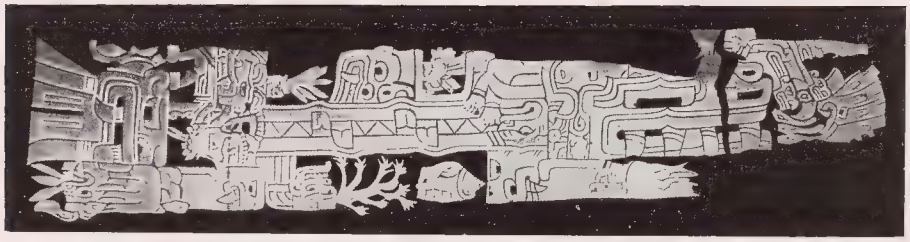
To the second chief mythical figure of Nazcan art Seler has given the name of zig-zag-staff-demon. He derives it in its essential characteristic from a motive which in my opinion can also be interpreted as a throwing-stick. The zig-zags appear also as volutes which Uhle considers to be feathers. In the more complicated figures with claws on the hands and on the turned out feet, there is a certain approach to the cat-demon, whose whiskers form volutes and make above the real face a crown with eyes set into it, which develops into a second face as in the segments of Chavin. The zig-zag-staff-demon also wears occasionally a zig-zag snake set with arrows on his back. The zig-zags are probably symbols susceptible of various interpretations, either as rays, feathers or as terminations of the centipede.



34. Citlaltotonametl, Ruler of the Age of the Great Wind; Codex Vaticanus A

The cat-demon is represented not only in pottery but also on the valuable embroidered cloths to be seen in the museums at Berlin, Stuttgart, New York, Toronto, and Lima.

Also characteristic for Nazca are vases in the form of heads with nose and ears modelled in black relief, and the eyes, mouth, hair and



35. Relief on a granite obelisk, Chavin de Huantar; from Tello, Wira Kocha, Lam. I, p. 274; see text, p. 35

beard painted. The faces are of the living and the dead. In the case of the heads of the dead the same holds as has been already said about the prepared trophies. The faces are variously painted, with black stripes, red and black patches, triangular and in other forms, on the cheek. The head ornaments consist of bands or strings wound round the forehead.

The archaic clay heads of the Gaffron Collection, whose provenance is given as Nazca, have already been discussed. Even to the painting on the face they resemble the style of Tiahuanaco; in other respects they resemble pictures from Nieveria and the Huaca de la Luna at Moche.

Finally there are found in the Nazcan style clay vessels in the form of female figures with zig-zag-staff ornamentation, and delicate, nude little figures of the same sex of a yellowish colour and of a squat steatopygous type, which recalled to me clay statuettes from Guanacaste, richly painted and having only a triangular patch of cloth attached to a string round the loins.

What has been said by no means exhausts the richness of Nazca in forms and in the representation of figures (68). A prominent position in Peruvian art belongs to the ruined site of Chavin about which the valuable work of J. C. Tello has recently given us the first real information. The "Raimondi stone", almost two metres high, with its most remarkable relief, was enough to reveal the special importance of Chavin, since it peculiarly unites Nazca and Tiahuanaco in its style by reason of the surprising freedom in the representation of small snakes on the sides of the head of the standing figure. The ray-like volutes of the segments of the Naualli (which seem to stand up on the head, but must be thought of as falling down behind), as well as those on what resembles staves in the hands of the figure are also of an individual style and distinctly recall elements in the Mexican wealth of forms (69). The Raimondi relief is actually surpassed by the $2^1/_2$ metre high "Tello obelisk", as I suggest the monument found by Tello in 1919 should be called. The fortunate discoverer has just published an account of it with illustrations which show clearly its extraordinary character. It is loaded in an amazing fashion with symbolic figures, some executed in the style of the Raimondi stone, others in the style of Tiahuanaco; others show details such as small plants and blossoms which are of peculiar workmanship. Equally grand and equally peculiar is the monolith, $4^1/_2$ metres high, in shape like a stilt, which was also found by Tello in his excavations at the temple of Chavin. It shows the head of a demon wild-animal, with snake hair, ear-ornaments and trimmings, some of which resemble the segments of the Raimondi relief, while others have plaited bands such as may be seen on the discs or bowls in the gold treasure described by Goddard from the Chimu district. The right paw is lifted, the left laid down. The stone from the church of Yauya (Province of Huari) also shows in relief a four-footed demon, like the one at Chavin, clearly in the act of descending, with fishes and octagonal spirals on the edge.



36. Drawing on a clay vessel, Trujillo district; Mus. f. Völkerkde., Berlin
(Copy by W. v. d. Steinen, Seler Archive)

Unfortunately Tello has not yet published the other results of the excavations in the temple of Chavin, nor his account of antiquities in the same style as that of Chavin, which may be followed northwards by way of Huari and Pomabamba as far as Pelasca, and traced in the pottery of the not far distant Chicama valley. We watch with excitement for the full archæological report of the matter of which the discoverer has only given us a hint here and there.

Recuay also occupies a special place. Its pottery is found in the Callejon de Huayllas and on the east slope of the Cordillera blanca from Huari to Pallasca, as Tello has recently shown. He considers it to be remains of a specially old culture. Although in its snake patterns and moon-animal patterns (70) it shows connection with Ica, Chancay and Nazca on the one hand and with Chimu on the other, its plastic work is of quite an individual style which reminds me most on Mexican soil of Tarascan modelled pottery. Recuay likes negative ornament, such as is found in the art of Guanacaste, and also resembles the same art in the fact that in representations of animals the head is sometimes modelled while the rest of the body is painted on the side of the vase. Whether these relations make sufficiently clear the real nature and the archæological position of Recuay appears to me doubtful. The connection of Recuay with Chavin especially needs to be thoroughly cleared up.

The blackish heads with plaits from Caxamarca, which was strongly influenced by the Chimu empire, seem to me as though they should somehow be grouped in the Chibcha culture; they are a unique type in Peru, comparable perhaps only with a head said to come from Cuzco in the Berlin Museum, which has the peculiarity that its Aimará cap is painted with geometrical patterns similar to the Ica style.

Peru whose wealth has become proverbial since the Spanish Conquest now begins to reveal itself to the archæologist and here also shows its great wealth worthy of a great past. It is to be earnestly hoped and desired that further methodical excavations may confirm and extend the results already obtained by research. Ecuador, where the work of Jijon y Caamaño, Uhle, Saville, Rivet and other scholars has already accomplished so much, will play a very significant part here, as it provides the important connection with Columbia's cultures which are geographically nearest to the district of the Central American culture.



37. Clay vessel, Valle de Chicama; painting represents water-birds, fish, and plants; in relief, three small frogs; Gaffron Coll., Berlin-Schlachtensee



NOTES

(1) This sea was called, according to Oviedo (III, p. 10 r) "pechry", approximately "great water". Cf. W. Lehmann, Zentral Amerika Teil 1, Languages, Vol. 1, Berlin (D. Reimer) 1920, p. 120, No. 38. *Pa* "Water" is perhaps related to *pelu* "water", a word in use among the Indians between Panama and Guayaquil. Cf. P. Anello Oliva, Histoire du Pérou, trad. par Ternaux-Compans, Paris 1857, p. 12; see also Garcilaso de la Vega, Primera Parte de los Comentarios reales, Lisboa 1609; further, *biro*, *piro* as treated by Jijón y Caamaño, Bolet. Socied. Ecuat. Estud. Hist. Am. II, Num. 6, Quito 1919, p. 352; W. Lehmann, Zentral Amerika, I, 1, p. 33.

(2) Such as Spondylus pictorum: cf. Uhle in the XIV Am. Kgr. Stuttgart 1904, p. 592. "Peru before the Incas" by the same author, in the "Sun", 30. XII. 1900, deals with excavations in the ruins of Marca Huamachuco. The particular kind of shell mentioned is said to be unknown in Peruvian waters, and only to be found on the tropical coasts between Panama and the La Plata island (North Ecuador). For Ecuador cf. Saville, Antiquities of Manabi, New York 1910, vol. 11; Verneau et Rivet, Ethnographie Ancienne de l'Equateur, p. 259ff.; Martin Dovello Jurado, Comunicaciones malacológicas. Cf. Bolet. Soc. Ecuat. Est. Hist. Am. Quito No. 1 (1918), p. 79—83.

(3) See above the note to "pechry".

(4) According to Oviedo (IV lib. 46, cap. 17) south of the Payta, balsas of reeds were in use; north of the Payta, balsas of wood. Rafts are common on Lower Central America for instance in the Gulf of Nicoya (Costa Rica). On the balsas of Ecuador and Peru, cf. Doc. para la Hist. de España V, p. 198, XXVI, p. 259; B. Cobo, Hist. del Nuovo Mundo IV, p. 220ff.; Relac. geogr. de Indias I, p. 13. Acosta, in his Hist. nat. y moral de las Indias 1608 lib. I, cap. 19, mentions hide-boats for Ica and Arica. The reed raft is still found in California and in Mexico among the Seri.

(5) On the bronze question, cf. Erland Nordenskiöld, The Copper and Bronze ages in South America. Comparative Ethnological Studies, 4, Göteborg 1921, particularly p. 160.

(6) The Tallan language or Sec was considered as dead. Otto von Buchwald published recently a short list of words collected by Spruce in 1864, which I hold to be Tallan. Cf. W. Lehmann, Zentral Amerika, I, 2, Nachtrag.

(7) So named after their nose-ornaments, customary alike in Columbia and Peru, which are still worn by the Colorados of Ecuador.

(8) According to Pedro de Cieza, both rulers were legitimate sons of Huayna Capac, and were born in Cuzco. Cf. J. J. von Tschudi, Beiträge zur Kenntnis des alten Peru, Denkschr. K. Akad. Wiss. Wien 39 (1891), p. 161ff.; Sir Clements Markham, The Incas of Peru, London 1911, p. 241.

(9) It is most regrettable that the considerable manuscript work of Huaman Poma de Ayala, which Pietschmann discovered in 1908 in the Royal Library in Copenhagen, and which is accompanied by numerous illustrations, could not yet be published. An account of the historical pictures on great plaques, which were preserved in the Temple of the Sun, is given by Sarmiento de Gamboa, Geschichte des Inkareichs, Abhdlg. der Kgl. Ges. der Wiss. Göttingen, Philol. Hist. Kl. N. F. VI, Nr. 4, Berlin 1906, edited by Rich. Pietschmann.

(10) Up till now there has been no definitely authenticated case in which the Tiahuanaco style is superimposed, stratumwise, either upon the two-coloured pottery of Trujillo or upon the polychrome pottery of the Nazca style.

(11) Cf. Fern. de Santillan, in Tres Relaciones de Antigüedades Peruanas, Madrid 1879, pp. 32, 33.

(12) Garcilaso, Comentarios Reales, Madrid 1800, Tomo IV, pp. 33 35 (with reference to Blas Valera).

(13) Fr. Gerónimo Roman, Repúblicas de Indias, lib. I, cap. 5.

(14) Calancha, Corónica moralizada del Orden de San Agustin en el Peru, Barcelona 1638. Uhle discovered in the ruins of Moche at a depth of 4 metres a child's grave in front of the northern base of the Huaca del Sol. From Calancha one learns that in Pacatnamu, that is, in the Chimu territory, 5-year-old children, Chicha wine and fruits were sacrificed to the moon. Perhaps this statement may shed light on the numerous funeral urns of children in the Calchaqui territory of North-west Argentine.

(15) See Miguel de Estete edid C. M. Larrea, Bolet. Soc. Ecuat. Est. Hist. Am. I, Quito 1919, p. 352.

(16) Cf. Uhle, XVI Am. Kg. Wien 1908, pp. 353ff., Abb. 4 u. 5; further, Uhle, Journal Soc. des Am. Paris N. S. X (1913), p. 362.

(17) Cf. Karsten, Zeitschrift für Ethnologie, Berlin 1916, pp. 155—216.

(18) The supernatural manifests itself in the powers and qualities of certain animals which men lack. Gods and their representatives, priests and those who exercise a similar function, appear in the form of animals, in animal disguise, with animal drapings and masks. Totemistic thought is taken over into the mythical and afterwards systematised.

(19) Mexican hieroglyphs also developed from the symbolic pictures to the preserved monuments of the neo-Toltec tradition, which reveals, in the Codices of the Borgia group, a highly developed but archaic state. The Maya-Indians, inspired by the Toltecs, further developed the symbol to a hieroglyphic script, which, however, was not phonetic.

(20) The centre of the New Kingdom was Gran Chimu (= Chanchan) while the Old Kingdom was centralised in the temple town of Moche, where older head-jars are found.

(21) Cf. Uhle, XVI Am. Kgr., p. 361, Abb. 11, Centre. The human figure has strikingly splayed, frog-like fingers, not unlike those of an otherwise human divinity of the Maya-manuscript in Paris (Codex Perezianus).

(22) See Hrdlička, Smithson. Misc. Coll. Vol. 56, No. 16; Vol. 61, No. 18. From Chiclayo in the north to Yauca far in the south, a unified brachycephalic people was settled, which unites Chimu and Nazca anthropologically. Only later do we have evidence of a customary deformation of the skull, and without mutilation of the teeth. This people stretched into the slower slopes of the Cordillas, and absorbed dolichocephalic elements of the inhabitants of the mountains of the type found in the district of Huarochiri where even today Aimará (Cauqui) is spoken. This is however later on the coast, and rare in the oldest graves. According to B. Cobo, the Mochica, the language of Chimu, still living in Eten, extended southwards far into the district of Ancon (Rio Caraguaillo).

(23) Miguel de Estete mentions sun-worship expressly only for the cold region: see his report, published by C. M. Larrea in the Bolet. Soc. Ecuat. Est. Hist. Am. I, No. 3, Quito 1918, p. 333.

(24) That the origin of the Quechua, the bearers of the Inca culture, must be sought south of the equator, is shown by the fact that among them the word for "midday" is the same as that for "north". The existence in Quito of an ancient Quechua dialect does not necessarily prove that the first home of the Quechua is there. Linguistic islands, as I showed for Central America, retain their peculiarities with great persistence, while the language of the great mass of the people from which these islands derive, undergo the usual philological changes. An expansion of the Quechua tribes must early have taken place towards the north, whose language had remained alive in the districts of Quito and of the Cerro de Pasto. The earliest sagas of the origin of the Incas have their home in Cuzco or on Lake Titicaca, with its islands.

(25) According to P. Luis Turuel, the companion of Arriaga, contained in P. Calancha, Coronica Moralizada, Barcelona 1638, lib. II, cap. 19, pp. 412—414. Characteristically enough, according to another legend, the coastal dwellers insulted Conn who came from the north, and who, as a punishment, deprived them of rain and dried up the land. He disappears before a mighty being coming from the south, Pachacamac. See Zarate lib. I, cap. 10, Velasco, Hist. del reyno de Quito lib. 2 § 2. Con is here clearly the representative of the noonday heat of the daily sun, Pachacamac, the kindly moon, who, coming from the south, has grown into a full moon, and whose lunar nature may be clearly seen in Garcilaso, Comentarios Reales, Madrid 1800, IV, pp. 33—35. In another myth sun and moon are created on an island in Lake Titicaca. The sun, however, throws ashes on the moon's face. The pallid light of the moon, which was formerly bright, is thus explained. The mightier sun is here probably the yearly sun.

(26) The origin of maize and of the other cultivated plants from the parts of the body of Vichama's predecessor, whom the sun-god created, but who was first torn to pieces by Pachacamac in an outburst of jealousy, but later transformed by him into such plants, recalls exactly the Mexican story of the people of Chalco as related by A. Thevet. Cf. E. de Jonghe, Journ. Soc. des Am. Paris, N. d. II No. I (1905). There the actors are: Piltzinteotl, the sun-god, Xochiquetzal, the young, beautiful moon, and Cinteotl, the maize god and the young god of food, the son of both who slept in a cave. This cave signifies the mythical west whose hieroglyphs were the curved mountain (Colhuacan) or the „maize-house" (Cincalco).

(27) Uhle, the distinguished authority on Peru, considers the stone structures in question, called Intihuatana, altars of the sun and perhaps of another divinity in addition, connected partly with ancestral graves beneath them. He does not think them observatories with one, far less two domes. I would not venture to contradict such an opinion, but would point out that these domes may very well have served as bases for wooden gnomons, so that these remarkable structures may have been used as observatories for definite heights of the sun. Joyce makes a similar suggestion. See Uhle, XVI. Am. Kgr. Wien 1908, pp. 371ff. Joyce, South American Archœology, London 1912, pp. 214—214ff. Intihuatana has the sense of "place where the sun is held fast"; "huata" means "year". Perhaps ropes were used for taking the height of the sun, for "huatana" = rope.

(28) Huiracocha: "the first principle of creation" seems originally to have been a divinity of the Aimará, who was taken over by the Incas, and blended with Manco Capac. The nature of Huiracocha is given in a hymn as indeterminate, neither male nor female. See Markham, The Incas of Peru, London 1911, p. 100 (following Lafone Quevedo Revista del Museo de la Plata III, 1892).

(29) Garcilaso says of the Pachacamac temple of the inhabitants of the Irma valley, that they were satisfied with the gods they had, and desired no other gods, least of all the sun, as they required no more heat than their country gave them.

(30) In Pacatnamu, according to Calancha l. c. the year was reckoned neither by moons nor by the course of the sun, but in primitive fashion by the position of the Pleiades, like the Totonacs of Mexico, according to the information of Petrus Martyr. The invaluable account of P. Martyr lies before me in the original manuscript of Savorgnano (?) for which I have to thank the kindness of Adolf Bachofen von Echt, Vienna.

(31) In the 4th volume of his collected studies, which is being published by his wife. In the Cakchiquel Annals of Guatemala "r-al chicop mez r-etal ak'at" "the young animal of the cat, the image of night". This reference was brought to my notice by the kindness of Mrs. Seler. According to Pedro de la Gasca, Descripción del Peru (Ms. Hofbibl. Vienna) Pachacamac is worshipped by the inhabitants of the plain. He transforms the man who keeps bad guard over the sea into a monkey, his wife into a zorra. Pachacamac appeared in various animal forms such as snakes and jaguars. Viracocha introduces sunworship into the highland.

(32) See W. Lehmann, Mexikanische Kunstgeschichte, Orbis Pictus, Bd. VIII (Berlin, Wasmuth); also Nachwort zur Toltekenfrage in Seler's Coll. Studies, Vol. IV; also the Seler anniversary volume, edited by me, Stuttgart 1922, pp. 281ff.; also an article to be published in the Zeitschrift der Gesellschaft für Erdkunde, Berlin.

(33) W. Lehmann, Zentral-Amerika, Part 1, Vol. 1, Berlin (D. Reimer) 1920, pp. 153—154.

(34) The dating of the jade figure of the "Bird-god" of Tuxtla by the North American School is in my opinion too early. The Maya chronology is altogether less clear and goes back less far than the Mexican. It is well, therefore, in studying the cultural conditions of North and South America to choose Mexican history as a fixed starting point. See W. Lehmann, Zentral-Amerika I, Vol. 2, pp. 1087 to 1088. For the Maya chronology see W. Lehmann, Seler-Festschrift, pp. 318—319 and the table after p. 644.

(35) W. Lehmann, Zentral-Amerika I, Vol. 2, coloured table of languages with notes on Santa Maria del Darien.

(36) Stuttgart Am. Kgr. p. 574. Jadeite from Ecuador see, e. g., Uhle, Bolet. Acad. Nac. IV, Quito 1922, pp. 225 226. Turquoise is very rare in Peru. J. C. Tello gives an illustration of a very fine engraved vase in this stone belonging to the Chavin culture. See the periodical Inca, Vol. I, No. 1, Lima 1923, p. 175.

(37) See Uhle, Pachacamac, Philadelphia 1903. Wiener, Pérou et Bolivie. Paris 1880, p. 471, gives an illustration of a vase-painting which is said to come from Puno and stylistically could belong here. It may perhaps come from the district round Trujillo. A highly interesting vase-painting of a similar kind from Santiago de Coa near Trujillo (Chao is clearly meant) given in Wiener, op. cit. p. 481, shows negroes with their masters building a wall, a scene which is thus reminiscent of the frescoes at Pachacamac. It is to be greatly regretted that the vases of which Wiener gives illustrations have not been more closely examined and brought to more general notice. The negroes appear extremely suspicious but there are old mentions of them from Darien (Quaqua district). See W. Lehmann, Zentral-Amerika, Teil 1, Bd. 2, Map.

(38) It is frequently found on Maya monuments, in a rough and rude form on the coast of Nicaragua, and on the islands of the lake of Nicaragua. In my journeys I only observed it as far as Guanacaste. With the slight differences in form of animal-headed figures, it occurs especially in the goldwork of Costa Rica and Chiriqui, whither had penetrated western branches of the Chibcha with shaft-graves. The western branches of the Chibcha seem to have followed on older, Arawak immigrants and it may have been the latter who made the mound graves. The Arawak element, which streamed out from the Atlantic coast as far as Honduras, indeed even into the territory of the Maya Indians, explains why the stones for grinding maize from Costa Rica to Honduras are so akin to those of the West Indies. The point of origin of both types lies in the country of the Proto-Arawaks (Caquetio) in north-western South America. The prehistoric Arawaks, therefore, at a time prior to the migration of the western branches of the Chibcha in Central America, come first into account as carriers of cultures, for which their mobility especially suited them.

The Naualli type is also met with in the territory of the Andaqui together with rather awkward stone figures and at San Agustin in the upper Magdalena valley, which Codazzi, Stöpel and Preuss have examined. The monuments show resemblances to stones from Ecuador, Chavin and Tiahuanaco. Of the Naualli type is the fox mask from the foundations of the Temple of the Moon at Moche and the mythical being of the Chavin relief, which forms a link between Nazca and Tiahuanaco, and can, to a certain extent, be paralleled in a ruder style at Manabi in Ecuador (Saville Coll.). I also saw small Naualli figures on ceremonial oars or spades from Ica. This is also the place to mention certain Idolos Amazónicos which come from the districts of a perished South American culture, and either belong to the old Arawaks or were introduced by them by way of trade, or else must be thought of as having originated under Chibcha influence.

(39) Aztecs first arrived as far as Guatemala, in the 15th century A. D. during the reign of King Ahuitzotl.

(40) The chronological relation of Chibcha antiquities to those of Marajó, etc., is by no means clear. The Chibcha culture seems to have preserved primitive characteristics of the Arawak culture, and to have developed in its pottery along individual lines, under the influence of a flourishing gold-technique. It may also form an element in the nobler form of the Cuzco face amphoræ, which perhaps are connected with the Aimará-like pig-tailed heads of Cajamarca. The Chibcha clay figures sitting on stools obviously belong to the anthropomorphic urns of the Amazon district (Maracá etc.), which are related with those from the River Napo, and whose connecting link is perhaps the remains of which Koch-Grünberg heard mention on the River Yapura (cf. Rio Caqueta!). See Koch-Grünberg, Zwei Jahre unter den Indianern, Berlin 1910, II, pp. 313—314. The urns on little seats (Duhos) — seats known in the West Indies in wood, in Central America, made of clay but in miniature—form a type for themselves and are possibly but a further development of a simple, anthropomorphic urn without seat, which Chancay has preserved, and which the Calchaqui culture has ornamented with geometrical and naturalistic painting, as well as rudimentary modelling. Ethnologically the most primitive type are the lidded urns of the Guarani, decorated with finger-imprints, which Nordenskiöld dug up in Sara (East Bolivia) and which also appear on the Upper Parana.

(41) Bearded figures of glazed pottery are frequent in Salvador. They are completely lacking in Nicaragua and Costa Rica, but appear in single specimens in two-coloured unglazed vessels from Moche in Peru.

(42) Unfortunately the details given by Duquesne about the Chibcha calendar are apocryphal and vague.

(43) See C. M. Larrea, Bolet. Soc. Ecuat. Est. Hist. Am., Quito 1918, I, p. 68.

(44) Seler Coll. Studies, III (1908) pp. 531—532 with illustrations 3 4. Seler points out the great resemblance between the pattern of the Cuicatlan vessels and Peruvian textile ornament.

(44a) W. Lehmann in Reports of the Royal Ethnographical Museum at Munich IV (1911) p. 103 and fig. 31 p. 102. A similar specimen with the figure of an ape is known to me only from Guatemala (ruins of Chalchitan, Huehuetanango). I saw it in the collection of Mr. Fleischmann, Consul in London.

(46) See Seler, Tonalamatl Aubin. Berlin 1900, p. 99; commentary to the Codex Borgia II, Berlin 1906, p. 253; cp. Codex Borbonicus sheet 13. The centipede also occurs with the goddess Xochiquetzal, ibid. sheet 19.

(47) The mythical being with the turned-back nose occurs frequently in Chiriqui and south-east Costa Rica in pottery paintings and gold work (coll. W. Lehmann, Ethnographical Museum Berlin). This peculiar nose also appears in the polychrome pottery of Guanacaste.

(48) The name contains the word "nem" "wild-cat", of which the whiskers form a naualli-like emblem of the cat-demon of Nazca.

(49) See Uhle, Journ. Soc. Am. Paris 1913, p. 109; Seler, Zeitschrift für Ethnologie (1912), p. 223 and list of the objects of the finds in the Seler Archiv, for the use of which I am indebted to the kindness of his wife.

(50) Among the Chibcha Nencatacoa plays a similar role, in the form of a bear or a zorra, also as god of the drinking bout, painter and weaver; cf. W. Lehmann, Zentral-Amerika Bd. 1, p. 51, Nr. 45. The fox (atoc) is zoologically not to be confused with the skunk (Spanish: zorra). But the zorra together with the fox and parrot belongs to the detested animals of the Peruvian sun-cult. In Costa Rica I collected tales in which the zorra is tricked by the clever, sly rabbit. In Mexico the rabbit is a moon-animal as well as being the animal of intoxicating drink. Eclipses of the moon, I was told in Costa Rica, caused hare-lips in children in their mother's body.

(51) I have also seen plectogeneous engraving on a great bowl in the Berlin Museum collection.

(52) In the fine two-colour ware of Chimu the wild-cat is rare, but does occur especially as head-ornament. It is not unknown in Recuay but the typical animal of Recuay and Carhuaz is the moon-animal and the zig-zag snake. The richly ornamented gold breast-plate from Cuzco in the Heye Museum shows in the centre the face of a wild-catlike animal similar to the Tincullpas of Ecuador of which Jijon y Caamaño gives illustrations. (Bolet. Acad. Nac. de Hist. I, Quito 1920, pp. 4—44 with plates.) M. H. Saville: A golden breast-plate from Cuzco, Indian Notes and Monographs, ed. F. W. Hodge, New York, Museum of the American Indians, Heye Foundation, 1921.

(53) One is tempted to rank this engraved pottery with a similar kind described by Uhle from Ecuador; but I am unable to see any pronounced resemblances between the Ecuador finds and the Maya art. Further the fragments in question reveal the presence of several styles, including the engraved, three-cornered head which is frequently found painted, as rudimentary head, in Nazca. See Uhle, Bolet. Acad. Nac. de Hist. IV, Quito 1922, p. 205ff.

(54) Nordenskiöld, Zeitschrift für Ethnologie, Berlin 1917, p. 16. Cf. also Baessler Archive. The more recent stratum on and under the mound, a stratum to which the Mound Velarde itself belongs, covers fragments together with human remains of persons laid simply into the earth in an extended position (cp. Nieveria). These sherds are connected with those of the Tiahuanaco style of the Mizque valley. The finds from the older level at the Velarde mound stand to a certain extent in clear connection with my finds from Guanacaste: but the finds on and from the Hermack mound contain also three footed vases with painting in the Marajó style, Wiener gives an illustration of an urn in the Marajó-like style painted yellow, red and black. (Pérou et Bolivie, Paris 1880, p. 157 bottom row, middle). It is stated to come from Marca Huamachuco, north-east of Trujillo.

(55) These peculiar fabrics in the Munich Ethnographical Museum were put in class IV in the arrangement of exhibits which I undertook. The finest piece is numbered G 2185, 2186. It is a fabric with patterns in white, yellow and brown running through it. Each field of colour has its own warp and weft, that is the warp and weft do not run the whole length of the piece. Where the colours end the warp threads are freely looped with the warp threads in the direction of the weft, but in the direction of the warp they are looped over the last thread of the warp. Thus throughout the whole piece at these lines of division, the weft is loose and the warp is fast. Probably this piece was made on a base in a filet-like manner. It is not weaving proper, as the threads nowhere run through the whole fabric. Patches of weaving are interlaced to form a whole. The same technique is seen in G. 1699, where a piece of simple linen textile and another textile with a simple pattern are joined. The looping is found also in the warp patterns of the two additional pieces.

In other cases (G. 1544) the patches are sewn together at the turnings of the weft, but in certain places a blue and brown weft-loop or two brown and one blue alternate over the same warp thread. Other patches (G. 2211, 2210, 1615, 1612) are woven into each other by alternating the weft loops over the same thread, and by sewing them in the direction of the weft. A real textile (G. 2022 to 2026) with brown warp and geometrical patterns has kelim-like slits running diagonally through the design; vertically, three yellow and three red weft loops alternate over the same warp thread. Finally in G 2089—2092, textiles with strips of Tiahuanaco ornament, the weft-loops on the edge of two colour fields are interlaced vertically over the same warp thread, but have diagonally fine slits after each warp thread. In the diagonal slits are to be seen (in 2089) double red outlinings.

(56) Whether weaving with small pierced boards was known in Peru, has not yet been definitely shown. Certain ribbons of the Munich collection were perhaps made by this curious process.

(57) Cf. Seler, Zeitschrift für Ethnologie 1912, p. 208.

(58) In this connection compare the two-coloured Chimu paintings representing beans, which develop one after the other to running bean-men.

(59) Seler, Zeitschrift für Ethnologie, Berlin 1912, p. 218, with illustrations.

(60) The upper garment of the high priest appointed by the Inca is, curiously, termed Huapil by the Anonymus (in the Tres Relaciones, p. 156ff.). This word was probably brought by the Spaniards to Peru from Mexico.

(61) Uhle, Bolet. Soc. Ecuat. Est. Hist. Am. III, 7—8, Quito 1919, pp. 25 26, fig. 16.

(62) See Calancha, Coronica moralizada, II lib. 1, cap. 2; Bandelier p. 47.

(63) Tello gives an illustration of a very fine Nazca vase in the form of a cat-demon of human shape, very richly painted and worked somewhat plastically, with decorative whiskers and the symbol of the cat on a white patch over the forehead (Inca I. Lima 1923). This piece also illustrates star-painting.

(64) See Nazca vases in Seler, l. c. fig. 427.

(65) XIV. Am. Kgr. Stuttgart, p. 585, fig. 4.

(66) I agree with Herbert J. Spinden that the growth of maize is of the greatest importance for America. Maize marks a great advance as compared with the hylaic manioc for South America. The archaic style and maize do seem to be found pretty well in the same districts in America. The primitive style would then belong to peoples who might be placed in a period prior to the introduction of maize. The two styles are archæologically very hard to distinguish, and one must not forget that the archaic styles may have developed out of the primitive style. Cf. H. J. Spinden, Ancient Civilisations of Mexico and Central America, Am. Mus. of Nat. Hist. New York 1923.

(67) See W. Lehmann, Festschrift Anthropol. Kongr. Nürnberg, XX. Vol. Abhdlg. Naturhist. Gesellsch. Nürnberg 1913.

(68) Nazcan pottery is distinguished by stirrup-shaped vases with two conical spouts, a type characteristic of the south, which is found from about Nazca to north of Chancay. The northern type is represented by stirrup-shaped bottles with a single, short, cylindrical spout at the top; this type reaches from about Lambayeque to Huacho. The double vessels which whistle when the water is poured out may be traced from Lambayeque to the neighbourhood of Chancay, single specimens still being found as far south as Pisco. A "chiflador" from Chancay with its long, conical spout, is reminiscent in form of the shorter vases with double spout of the Nazcan style.

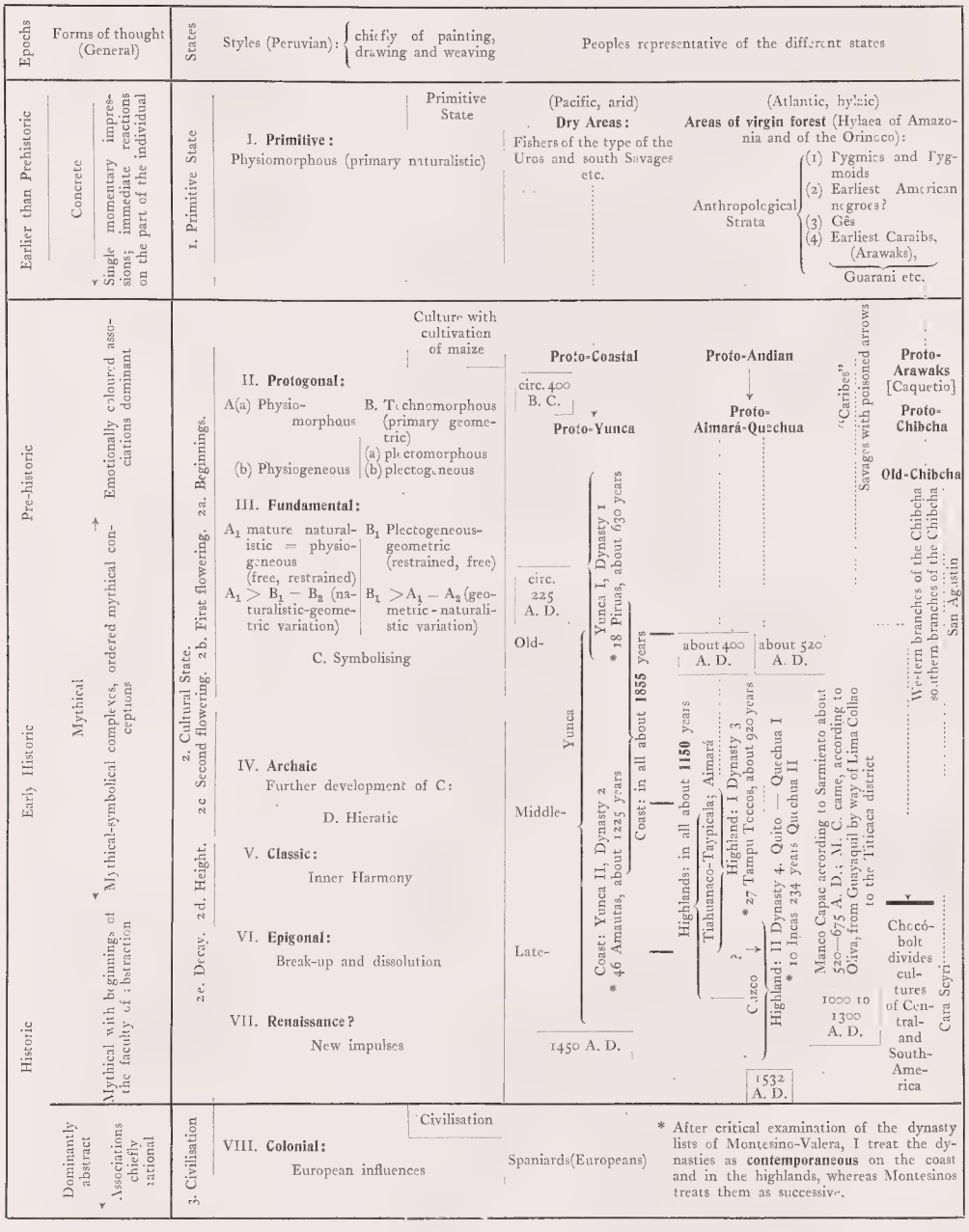
The three-footed clay vessels, extremely common on Mexico and Central America, many of which make a rattling noise are, rare in South America and perhaps not really native to it. In Peru they seem to be confined to the northern part and in Moche are ornamented with patterns markedly distinct from those of the rest of the pottery in the ruins.

(69) There exists a certain connection between elements of style in the Chavin reliefs and in the great, unique stone-reliefs from Santa Lucia de Cozumalhuapa from the Pipil district of Guatemala. Cp. especially Block IV, c 7195 and Plate No. 22 of the collection in the Berlin Ethnographical Museum. Naualli jaws with pointed teeth, divinities in descending position, volutes in sprays with buds, blossoms and fishes are found in the Toltec art of Cozumalhuapa. The flowers and fishes are especially reminiscent of the frescoes of Teotihuacan and of representations of Chich'enitza. One almost receives the impression that the style of Chavin took over such Toltec elements and made further individual use of them.

(70) The animal with the pointed snout and the contorted head-dress is in my opinion not to be confused with the cat-like wild animal. The wild animal with pointed snout is connected in Chimu drawings with the sickle of the moon and very likely corresponds to the fox in the northern lunar culture of the coast.

A. Peruvian Chronology, Styles and Dynasties.

Table prepared by Dr. *Walter Lehmann.*



* After critical examination of the dynasty lists of Montesino-Valera, I treat the dynasties as **contemporaneous** on the coast and in the highlands, whereas Montesinos treats them as successive.

B.

Attempt at a Chronology of Old Peru by Dr. Walter Lehmann

Ethnological Institute of the Ethnographical Museum Berlin

Possibility of foreign influences

Primitive (+) Earliest: Caribs, Arawaks

Plecto-morphous

Plecto-geneous

naturalistic

Language of Eten

Yunca

Aimará

Savages with poisoned arrows. "Caribes con yerba."

Proto-Arawaks spread the cultivation of maize from Central to South America and in South America; throwing-stick, head-trophies; anthropomorphic urns; Idolos Amazonicos

Arawaks of the Antilles with Duhos and three-footed stones for rubbing maize corresponding to Costa Rica etc. Goaxiro "chieftain" in one of the languages of Darien

Present day Arawaks as for example Goajiro

Chocó-bot

Proto-Arawaks (Caquetio)

Guarani etc. Grave urns simple, later anthropomorphic

Western branches of the Chibcha: Cueva, Guaymi, Quepo etc.

Throwing stick

Proto-Chibcha

Old-Chibcha

Successors of the western branches of the Chibcha

Zipas of Chia-Muikita (since about 1470)

Zaques of Ramiriqui-Tunja Priest-princes of Iraca-Sogamoso

Chibcha

Gold spider and moon animal

S. Agustin with relations with Tiahuanaco, Ecuador, Zapamé etc.

Southern branches of the Chibcha in Ecuador

Chibcha branches like the western

In East Bolivia are found Tiahuanaco branches, Arawak and Chibcha elements as well as primitive Guarani urns

Hylaic cultivation of the Maniok plant

oldest Araw. influences in Central America (as far as the Maya area?)

Cultivation of maize

1. Bochica, bearded, 2000 years in Sogamoso with cult of the moon

2. Nemterequeteba, bearded, 1100 years, comes from S.E. with Llama

later Arawak influences in Central America

3. Zuhé (Xué "Sun")

Gornachacha (cp Mexican saga of Uizilopochtli) in Tunja with sun-cult (Hunzahua)

Nencatoca Coyotlinaual Patron of the Amanteca

Fo

Quetzalcoatl ce Acatl of Tollan-Cholollan luni-solar

Feather serpent

Quetzalcoatl of Tollan lunar

Teotihuacan-culture

Mexicans

Neo-Toltecs (ab. 600–1168 A. D.) [Proto-Aztecs from 836 A. D.] More recent Pipil. Nicarao (Ticomega-Maguatega about 800–1000 A. D.)

Fo

Old-Toltecs (circa 0–600 A. D. best period about 200–300) older Pipil of Salvador and Guatemala, Sa. Lucia Cozumalhuapa

Cintalcotonamel

Proto-Toltecs (circa 429 B. C. —0) oldest Pipil Izalcos of Salvador

Three footed Pottery

Mangue (Pränicarao)

Chorotaga-Mangue

Fine black pottery of the island Chira; negative ornamentation

The culture of the Maya Indians is in the main dependent on that of the Toltecs and is therefore not inserted here. One has to distinguish: primitive, earliest Maya Indians (Huastec type) and Maya Indians developed under Toltec influences), old, middle and Neo Maya and their present day descendants

Fine black pottery fine two-coloured pottery

gold work with divers

Gold spider Cerro Zapamé

Dynasty Naymlap Parallel or = Yunca I? Introduction of the Kelim technique?

Bruning Relief

Lambayeque

Fine black pottery

Building of pyramids

Population with great club **Yunca II** conquers Yunca I

Fox-mask (see Pachacamac)

centipede men

Bearded figures

Three footed pottery of peculiar style

Moon animal fox-mask

Portrait heads of Chicama

Head-jars

Population with feather-club + throwing stick **Yunca I**? is conquered (see Nazca)

Moche (Old Kingdom)

Chimu (Chimor) Trujillo

Chimu late black pottery + Cuzco style

Tiah. Epig. II

Tiah. Epig. I

Fine two-coloured pottery hieratic and naturalistic

Hall of Arabesques divers and Ica-birds

Chanchan (New Kingdom)

The Area of the Coast

Chancay late, Chancay middle,

alternating zig-zag serpent

white painted rings + alternating triangles

Chancay

partly plectomorphous engraved pottery

Ancon (shell heaps)

in layers one above the others

a. Chimu late, black

b. + Cuzco style

c. light coloured head jars

Tiah Epig. II three-coloured

Tiah. Epig. I

Tiah. old

Diving-scenes on textiles

Buildings with frescoes

Head-jars

Nazca Epigonal

fox divinity

Sherds of the Chancay style in the oldest walls

Throwing sticks

Extended burial

Lima

Pachacamac

Nieveria

Ica local style + Cuzco style

Ica birds

plectogeneous-geometric

Chulpaca style

Nazca-like row of humps

Ocucaje Acari

Ica (Nazca-Epig.) Cuzco style

Alternating, geometrical serpent on the pottery and on textiles of the kelim technique

Plectomorphous "textiles", basket plaiting

Ica

Ica-Nazca (Pisco)

I geom. altern. serpents

II a. naturalistic, mature

b. bearers of feathered staves (s. Moche)

c. mythical beings with the throwing sticks and head trophies

Nazca

III modelled heads (Gaffron collection)

Portraiture of Tiahuanaco style

moon animal

Recuay three-coloured

Zig-zag serpent and moon-animal, negative ornamentation (as in Mangue-style)

Recuay

Northern Sierra

Recuay

Chavin

Raimondi Relief (c. Nazca, Tiah. portal)

Tello Obelisk (c. Sa. Lucia Cozumalhuapa)

Chavin (influences as far as Chicama)

Heads with plaits (Aimará?)

Cajamarca

III Epigonal

naturalistic membra disjecta

geometric quodlibets

II

I (plectomorphous) engraved pottery

a. plectogeneous

b. naturalistic depending of Nazca Posnansky sherds

Tiahuanaco (Bolivia)

Tiahuanaco

Tiahuanaco-Taypicala*

Epochs of newer and older buildings

→ megalithic

Portal style

Palace style Copper age

Highlands

II plectogeneous geometric, naturalistic, dependent on Nazca (see Ica, Cuzco)

I plectomorphous pottery

see head-trophies, fish and throwing-stick)

Haturcolla

Zig-zag style

Neo-Cuzco Inca

Old Cuzco (Face-amphorae influenced by Chibcha)

Quito

Cuzco Epigonal (Chincha-Atacameño style: Chullpa-Colla)

Cuzco (Peru)

Cuzco

Cuzco branches

Tiah. branches

Estilo draconiano (Nazca influence)

Individual style (Arawaks-Guarani?)

Calchaqui (NW Argentine)

* B. Cobo IV p. 65





LAND, PEOPLE AND MONUMENTS

I

The country, of the history of whose art it is here proposed to treat, lies between the equator and the tropic of Capricorn. Twice in the year the sun in its skies passes through the zenith. Looking at the country in its relationship to the great, climatic zones, one would expect to find it warm and damp. The effect of this relationship is altered by the continent and its vertical division. The whole of the western part of South America is traversed by the ranges of a high mountain chain. The climatic zones there no longer lie in their broad, horizontal planes but in layers crowded close together and one above the other, which begin at the eastern foot of the Cordilleras with tropical rain-forests, and end on the peaks with eternal snow and glaciers. Only the east face of the chain, however, is covered with the Montaña, the damp mountain-woods, owing to the fact that it stands in the path of the Atlantic trade-wind, which sweeps over Amazonia from the east. The western face has little rain and on the coast at its foot there is a temperate desert climate. In winter, when the sun has travelled beyond the equator to the north, a damp mist, called Garrúa, does indeed prevail which refreshes somewhat the dried-up land and makes grass and flowers come out on the hills. But when the sun returns, it quickly scatters the mist and burns up the thin covering of plants. It is the rivers which come down from the mountains and flow through the sand, that make the land habitable. The human cultures root on their banks.

The dryness of the coast penetrates far into the mountains. The high eastern slopes of the Cordilleras break all the force of the Atlantic trade-wind. On the whole, the climate of the central highlands inclines to be western in character, and here as on the coast irrigation is necessary for cultivation. The heat of the sun is tempered, however, in the upper valleys and this district was one of the most promising as a seat of cultivation for the mountain peoples.

The ideal climatic conditions are again left behind on the Puna, the high plateau of the south, which, almost 4000 m. above sea-level, is exposed to all atmospheric influences in their severest form and in its climate resembles an arctic country rather than the richly wooded districts of the eastern plain, so close to these bleak heights. There is something great in the lines and forms of the landscape of this "roof" of the South American world, but it is not free from an almost sombre melancholy, which is often peculiar to monotonous and remote mountain ranges. The severity of the climate is greatly moderated by the waters of a lake, called Titicaca, which lies in the high plateau, 3850 m. above the sea, and is nine times as big as the Lake of Geneva. On its islands, Titicaca and Coati, which were dedicated to the sun and the moon, stand ruins of old palaces and temples.

A group of mountains, Huillcanota ("House of the Sun"), in the north-west, shuts off like a bolt this tract from its neighbour, which owes its special character to the great valleys of the Ucayali, the Marañon and their tributary rivers. On the other side of the pass La Raya in the Huillcanota the streams begin to hasten to the north-west and swelling to rivers and floods, they tear valleys deeper and deeper out of the side of the mountains. Between them rise the ridges of the Cordilleras like the bars of a grid-iron. The mountains are thus very difficult to cross, and the achievement of the Incas in overcoming these obstacles with their military roads is one of the best examples of the strength of the great empire of the Cordilleras.

The high valleys where the Andes streams rise have already been mentioned. In the elevation of the land they occupy a position between the high, inhospitable Puna and the desert-like



38. Tiahuanaco, west pillar of the Calasasaya; lava; from a photograph by A. Poznansky, La Paz.

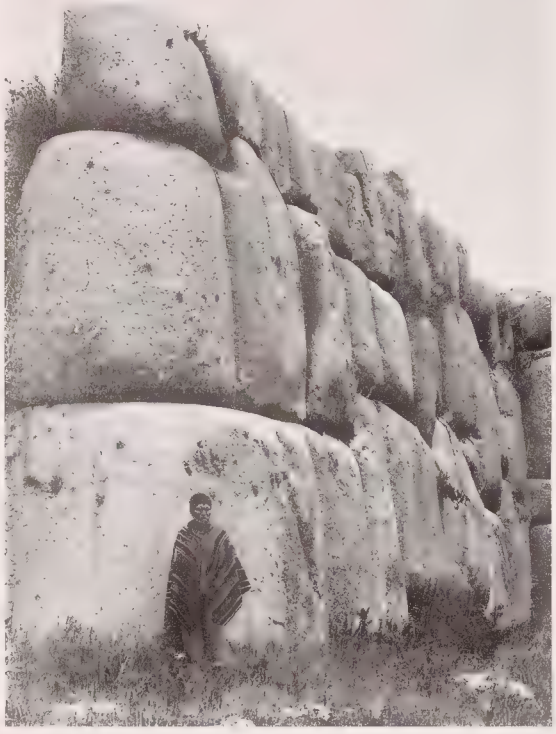
coast. And like their geographical situation, their climatic conditions are mid-way between these two extremes, and offer a seat of culture than which none more favourable is to be found in Peru. In this landscape, where conditions of living were ideal for human cultures, was the home of the Quechua, the best and most distinguished representatives of the Inca kingdom. They breathed the fresh Andes air without growing stiff with cold; the sun shone enough to warm them but not with such violence as to torment them. On the Puna there is extreme cold even with a sun that stings in the thin air; on the coast there is the opposite extreme, the parching, hostile glare of the sun. In a balanced, harmonious mean lie the high valleys and depressions which became the heart of the kingdom of the Incas — the "Quechua". (Middendorf, Runa Simi, p. 4).

So is the district called and the people who lived there were called after it. Their language became the official language of the Inca kingdom, the capital of which, Cuzco, was situated in one of those high valleys. Far in the north, in the neighbourhood of Quito below the equator, there was also a Quechua dialect spoken of a primitive kind. And here again the language appears in high basins.

The temperament of a people is determined in essential characteristics by landscape and climate. Among the Aimará, the inhabitants of the Colla, the bleak Puna districts, one expects to find men of an unapproachable, gloomy disposition, and this supposition is thoroughly confirmed. The coast will produce passionate temperaments, sensuously inclined, with a lively, excitable imagination, which often portrays itself in vase paintings and clay modelling. In both cases the mean is exceeded in one direction, as with the respective climates. The Quechua temperament also reflects the climate. Its characteristic is moderation. Let the reader look at the great amphorae (Plate 92). Their contour, their form is unique in Peru; from the edge of the foot, through the curving body to the cup-like neck and the lip, the vase rises in noble simplicity. The amphorae are often decorated with fine paintings of plants (Plate 90), with graceful twigs with delicate hanging flowers of a pale violet. Plants were also painted on the coast, as on the Nazca vase on Plate 20, the painting of which is shown extended in the flat on Plate VII. But what luxurious wealth in these twisted sprays, in the heavy burden of the fruit, in the fire of blossom compared with the almost stern simplicity of the bending heather on the Cuzco amphorae. Side by side with them stands the noble modelling on the stone bowl (Plates 97, 100, 101). There is no exaggeration in any sense, but a calm harmony, as in the snake bowl on Plate 101, round which flows the play of the twining snakes like quiet music. On the coast the snake was also painted and modelled in clay, rarely, however, simply as an animal, but in Nazca as in Chicama, as an unreal, fantastic being (Plate 62).

Cuzco is not less far removed from the more lively and often exaggerated style of the coast than from the extremely restrained forms of Tiahuanaco in the southern highlands. The types of artistic conventionalisation seem to be graded as the temperaments of which they are the expressions, and therefore graded also as the landscapes and the climates in which the temperaments are formed. At Tiahuanaco the typical form is conventionalised in an extremely severe manner, which is carried so far as to be, in the frieze of the Gate of the Sun, right-angular and cubic, every movement being strictly confined to what is essential, with an effect which is almost solemn. The composition of the most important works is symmetrical even down to the details. The effort is always towards the universal, the opposite of what is individual. Much greater freedom is preserved in form and contour on the coast; the movement is less restrained, and even though the coast, as seen in the work of Nazca and Pachacamac, is far removed from the individual, it knows the charm of asymmetry in detail, and the northern coast, in its conventionalisation of the individual, shows a preference for it. Again Cuzco stands in the middle. In the form of its amphorae, in their geometrical ornamentation and that of the bowls and cups (Plate 92, 89, 95, 93), a clear symmetry is dominant. Its strictness is relaxed a little, but only to be emphasized anew, in the very simply conventionalised twigs of heather (Plate 90), the lines of which are animated by a steady, gentle rhythm. Thus on the whole one would say that Cuzco inclined to the style of Tiahuanaco rather than to that of the coast. But it is distinguished from the latter by the simple harmony of its proportions, which might almost, when compared with the more powerful forms of Tiahuanaco, give the impression of poverty, were it not that in every line and in every form a wonderfully fine, high art finds its expression. Thus Cuzco is a compromise between Puna and the coast, and has a balance which corresponds to all its conditions of life, as given by nature. It seems to be this balance and the balance of temperament and climate that gave Cuzco its position in old Peru, and allowed it to become the first and inmost cell of a great state.

One would point to the famous heads of the Valle de Chicama (Plates 78—81) to show that, on the coast also, works of art were possible which unite proportion and repose with intense inner life. But in a moment one sees clearly that these plastic works of the coast belong specially to the northern coast. The form is only slightly conventionalised and it is precisely the individual traits which are conventionalised. This emphasis of the individual is an essential characteristic



39. The fortress Sacsahuaman near Cuzco; polygonal limestone blocks; from a photograph in the Seler Archive.



40. The fortress Pisac, Urubamba valley; king's palace and temple of the sun; hewn porphyry blocks; from a photograph in the possession of Dr. Gaffron, Berlin-Schlachtensee.

of the northern coastal districts. The individual lacks symmetry to a certain extent and a tendency to conventionalise especially the traits which make up the individual includes a tendency to asymmetry in the composition. Consider the head of the one-eyed man (Plate 78) the head with the feather rosette, and the fine head next to it (Plate 74), one of the blind (Plate 71): the lack of equality in the forms of the individual is nowhere removed by conventionalisation towards the type, but it is precisely this lack of equality, the individual, which is conventionalised. The style of representation never freed itself from the asymmetry caused by an eye being gone, by a wart or small irregularities in the features. As works of art, the best of these heads are incomparable. It will not be necessary to state here that in thus grading the forms of conventionalisation, no judgment of values is implied. It is purely an attempt to arrange methods of artistic work.

As for the southern coast, one could bring forward the fragments of red clay-heads from the district of Nazca, which can be seen in the Gaffron collection in Schlachtensee, to show that here a style of conventionalisation is given expression which should properly, after what has been said, be characteristic of the highlands (Plates 40—43). Here it is above all the typical which is conventionalised, and the composition is quite symmetrical; the repose on the faces is deeper and much more remote from reality than the repose of the Chicama heads, which at any moment could go over into free motion. But the near relationship of the Nazca heads with Tiahuanaco is beyond doubt and we do not see in them creations purely of the coast but a fusion of the styles of the southern highlands and of the southern coast in plastic art — conventionalisation of form, that is, of the typical, regular form, without excessive simplification; conventionalisation of movement without extreme constraint; symmetry of construction which does not become geometrical.

Finally one could point to the appearance of the Tiahuanaco style in vase-paintings from Pachacamac on the middle coast (Plate 48 and figs. 54, 55). Mature and late works of this style have been found there. Uhle calls this late style "epigonal style". The influence of the southern highlands is beyond question; for the classical work of the Tiahuanaco style belongs to the Puna. The possibility of importation is not to be rejected off hand.

One cannot blink the fact that the word style has here different meanings. When I talk of Tiahuanaco style in reference to the frieze of the Gate of the Sun, I mean a local style, which is native to the soil where it is found and in harmony with the surroundings. When, however, one talks of that epigonal style, one means a branch of that local style far removed

from its place of origin and one could not term this branch local style. What is meant much rather is that at this spot at a certain time a style which was not native to the place gained a certain influence. One can therefore distinguish between a local style and the style of a period, that is, a style which in its essence is conditioned by a locality, but which spread at a certain time and became important in other places as well for longer or shorter periods. Thirdly, there is the style which is dependent on the material, the material style. A material style is not necessarily bound to a place. One can say of the Cajamarca heads for example (Plate 88) that they are worked in a style as if they were gold: or one can see in the faces on some Cuzco amphorae (Plate 89) how a technique for gold-wire was applied to clay. In each case one is thinking of a material style. From the standpoint of the possibilities of artistic treatment which gold allows by reason of the laws governing its use as a medium, it is possible to speak generally of a material style of gold, without connecting it with any definite local style.

One could thus draw up a diagram composed of vertical and horizontal lines of different lengths: on the vertical lines would be represented the local styles, and on the horizontal the extended styles of periods, which from time to time originate out of local styles.

The material style can locally be the carrier of the style of a period which originated in another material; as for example the Tiahuanaco forms in Pachacamac which arose as the style of a period through incrustation with shells, that is in a peculiarly local material style.

The diagram suggested is here intended to clear up not so much the historical relations of the styles and the works of art as the meaning of the word style in the history of the art of Ancient Peru. It will be remarked that personal style does not appear in the diagram. It is impossible in the history of the art of Ancient Peru to characterise special personal styles. They must be thought of as contained in the local styles.

II

The simple clarity peculiar to the Cuzco style seems also to penetrate the form of the Inca state. In it the individual and the family had something of the regularity of square blocks. They formed the communistic mass, which an absolute ruler, the Inca, guided and in reality



41. Wall of the temple of the sun, Coricancha (Gold Court), Cuzco; from a photograph in the Seler Archive.



42. Colcampata, Cuzco; so-called Manco Capac palace; from a photograph in the Seler Archive.

also supported. By the constitution of the state he guaranted to each man his daily bread and the roof over his head. For that he needed unrestricted political and religious power; he was looked upon as the son of the state divinity, the sun, and everything, living or dead, within the boundaries of his kingdom, was his.

It is to be expected that such a powerful, well-constructed kingdom was bound to find its expression in architecture. The symbol of the classical period is the clear hewn blocks of Pisac (Fig. 40). No less an expression of power and order are the great, military roads with their excellently fitted, smooth stone surface.

The architecture of Ancient Peru can from the point of view of building material be divided into that of the mountains and that of the coast, at bottom therefore on a geographical basis. In the mountains stone was chiefly employed, on the coast clay bricks. Those are the broad outlines. The clay brick was also used for walls in the Cordilleras as in the high wall of the Huiracocha temple at Rajchi (Plate 10). But in such cases it was protected against the wear of the weather. The base walls and the unprotected outer walls were carried out in stone, in blocks (fig. 39), in block-plates (Plates 5, 6), in hewn stone (Plate 8, figs. 41, 42) and in roughly squared boulders.

A typical building in blocks is the fort Sacsahuaman on a mountain spur north-west of Cuzco. A triple row of great, zig-zag walls goes round the height on the north side where it is most easily assailable. The walls are built of many-cornered limestone blocks. The blocks are fitted with such accuracy that not the slightest trace of a join is visible. Apparently it was the great blocks whose natural form was taken into account, and the smaller blocks were chosen to fit their outlines. Thus resulted the numerous angle fittings, of which the famous stone of the twelve angles in the palace of the Inca Rocca in the Calle del Triunfo is such an excellent example.

When one considers the architecture of the district of Cuzco, one is inclined to assume a transition from the polygonal to the regularly hewn block. The polygonal blocks of Sacsahuaman, the rectangular ones in the palace of the Inca Rocca, the curved hewn stones of Colcampata (fig. 42), and the straight hewn courses in the Callejon de Loreto (Plate 8), the smooth wall of the Coricancha (fig. 41) and the clear, finely-cut stones of Pisac (fig. 40) show a line of development without any real gaps.

The material of most of the buildings of Cuzco is a blackish lava. For single walls syenite was used according to Squier, according to Middendorf diorite. But according to the accounts of travellers the black volcanic lava stone gives to the architecture its characteristic appearance. The walls of the Callejon de Loreto show a picture from pre-Spanish times which has suffered little change (Plate 8). The wall to the left was Amaru-cancha, the "Serpent Court", the palace of Huayna Capac, the last great Inca. The smoother wall of hewn stone to the right belonged to the Aclla-huasi, the house of the virgins of the sun who were chosen in early youth for the service of the sun and of the Inca. The fragmentary wall of Colcampata is a work of

the "classical" period and in doorway, window and finely-fitted, curved, hewn stones is an excellent example of the best Inca architecture (fig. 42). It stands on a terrace half way up between Cuzco and the Sacsahuaman. The most famous building of the Inca capital and of the whole kingdom was the temple of the sun, Coricancha, the Gold-Court. Today the remains of the old walls enclose the church and cloister of San Domingo. The wall of the Coricancha is as smooth as if it were polished and the joins of the hewn stones are so fine that the round wall has almost the effect of an engraved plate (fig. 41). Each stone is cut to allow exactly for the curve of the wall and for its inclination to the upper edge. According to Garcilasso de la Vega the temple wall had on the outside surface a frieze made from thin beaten plates of gold.

A peculiar characteristic of the Inca architecture seems to be the trapeze-like form of the doors, windows and niches (fig. 43). The use of this architectural form is so general as to be almost a law for the country, which fact one would like to interpret as the expression of the style of a period, wherein the conceptions of an epoch are embodied in architectural form.

Before we leave Cuzco, let us return once more to the Sacsahuaman height. Outside the fortification and opposite the walls, broad stairs and seats are cut in a rounded knob of rock. This is called "Throne of the Inca" (Plate 9). It may be termed architecture in rock since the living rock is its material. These seats and stairs however seem to have been intended not for living rulers but for the spirits of dead as Uhle has shown (cf. Deutg. d. Inti-huatana. Vienna 1909). For the whole district abounds with graves in niches and hollows with stone mummy-seats, stairways, open altars and seats; and all this carved out of the rock of the mountains.

On a mountain height above the valley of the Urubamba not far from Cuzco lie the ruins of the fort Pisac. A little way off, facing the mountain heights and the great valley, are the wonderful porphyry walls of a king's house and a shrine of the sun (fig. 40).

Porphyritic granite we find further down the valley in the huge blocks of the fort Ollantaytambo, one of the strongest fortresses of the Inca kingdom. It lies in a very wild impressive landscape of the Urubamba valley. The fort is built on a spur of the mountain on the side looking over the valley. It is defended by terraces in the direction of an adjoining valley. The frontal walls of the terraces consist of irregular but finely-fitted, smoothed stones. To "wall" always means, in the technique of exactly fitting boulders and hewn blocks, that in the outer wall the stones fit together without any kind of mortar or joint. Middendorf found in broken-up Cuzco walls that the inside end of the stone was sometimes bedded in fine clay. The doorway on the top terrace on the left, and the row of niches reveal the Inca origin of their architecture in the trapeze form of their outlines. Here also blocks of considerable size are laid, as on the top terrace on the right at the side of the stairway. But they have the effect



43. Cuzco, house entrance from pre-Spanish times; from photograph by in the Seler Archive.



44. The fortress Ollantaytambo in the Urubamba valley; terraces; porphyry; from a photograph in the possession of Dr. Gaffron, Berlin-Schlachtensee

almost of delicacy beside the masonry which faces the visitor on the fortified height (Plates 5, 6). From the frontal surfaces of three blocks project thick bosses, as if they had been broken off; similar projections are often to be seen in walls made of blocks in Cuzco, also on the top terrace on the right at Ollantaytambo; out of the long block on the masonry which is set under and juts out beyond the great plates, projects a strong, horizontal stone rail (Plate 5). Ed. Seler thought that the stumps served as points for the levers to work on when the blocks were being set up. This explanation is convincing. At the same time through the emphasis upon their important functions in the course of construction the forms of these projections gain a peculiar charm, dependent upon the realisation of their technical significance, which would bring them close to modern ideas of form, if the emphasis were not quite unconscious and unintentional, in contrast to the conscious and deliberate forms of our time.

Some of the blocks lying round about have T-shaped grooves for metal brackets, with which the blocks were to be joined, as was the fashion in Tiahuanaco on Lake Titicaca. The blocks for the construction of the fortress were quarried out high up on the mountain face on the opposite side of the valley. It is difficult to imagine how the heavy stones were transported through the deep valley, across the river, and then up to the fortress. Many great blocks on the lower slopes of the fortress — among them the "tired stone" 6,30 m × 3,70 m × 1,50 m — give the impression that the building is unfinished. The terraces are certainly finished. The buildings, in which the use of the great blocks was preferred, seem to differ from the other buildings, which are, it is true, massive and solidly fitted, but which do not reveal the tendency to excessive proportions in the size of the blocks. Here we do not seem to have an unbroken line of development, but rather two different architectural styles appearing side by side and

without any transition from one to the other. Cuzco may be very old and may stretch back to a time which found its expression in the style of the polygonal block. But it is scarcely possible to say with certainty who were the bearers of this period-style. In this very dark historical background the Aimará seem steadily to be becoming more distinctly visible. But to proclaim them already as the certain bearers of this style for Cuzco and its wider surroundings is more than one would care to do at present.

A few years ago Hiram Bingham succeeded in making one of the most amazing discoveries since the Spanish Conquest at a place some considerable distance from Ollantaytambo. He found, on a precipitous mountain round which the Urubamba flows, an Inca town Machu Picchu beneath a thick covering of virgin forest. After months of work the town was cleared of its overgrowth of plants, and offers now, with its bright houses and steps climbing up the mountain, surrounded by the enormous wooded valley of the Urubamba and, in the distance, by the high peaks of the Cordilleras, a sight which has scarcely its equal in the world. The town has obviously never before been trodden by a European. Its principal building is "the house with the three windows"; its walls are among the best ever erected by Inca architects. (Nation. Geogr. Magaz. XXIV, 4. pp. 387ff.).

The preference for unusually huge stones and the technique of the metal brackets is found again in the southern highlands in the ruined town of Tiahuanaco. The way to it leads through the La Raya pass. On this side of the pass, near Rajchi, stands one of the most singular buildings of the Cordilleras: the temple of Huiracocha (Plate 10). On a 3 m high base-wall built of black lava hewn blocks rises a high claybrick wall, at one end of which the gable wall is still preserved. Middendorf estimates the height of the centre wall at 15 m. Nine high, door-like openings and nine large windows in this wall unite two wide halls under one roof whose edges rested on two rows of twelve round pillars. Of these two rows only one pillar remains standing. Like the centre wall, it consists of a base of lava blocks surmounted by clay bricks. The window of the gable wall and the doors of the centre wall are trapeze-shaped. That is Cuzco style. More cannot be said. Accounts of the building of the temple are contradictory. Garcilasso de la Vega states that it was erected after the battle on the "field of blood" and the victory over the Chancas, Cieza de Leon and Betanzos that it was built in olden times in honour of a wonderful old man who is described as the creator of the universe and as a god wandering through the world. These accounts however give no clear evidence as to the real builders of the temple.



45. Rajchi near Cacha, Huiracocha Temple, centre wall; from a photograph in the Seler Archive

The high, free round pillar was also an architectural form in the art of Ancient Peru. But it seems only once to have been given form: in the rows of pillars of the Huiracocha temple.

Over the Raya Pass the road runs southwards to Lake Titicaca. Three hours by the road from its southern shore lies Tiahuanaco, 3900 m above the Pacific, whose coast is only 300 km distant as the crow flies. Bare heights surround the flat valley, in which a broad plateau, Akapana, has been artificially erected. At its foot to the north lie three enclosures bordered by stones. Calasasaya,



46. Chanchan, brick wall with stucco-ornament; from a photograph by Mrs. Cecilie Seler-Sachs, Steglitz

the biggest, is in the middle. A flat space, 135 m × 118 m — almost a square — of the western side is surrounded by monolithic pillars. The pillars to south and east are cut out of red sandstone and are very weather-beaten; the western pillars are of hard lava and therefore well-preserved and sharp in outline (fig. 38). G. Courty discovered by excavations that the spaces between the pillars were formerly walled with hewn blocks (Créqui-Montfort, Fouilles de la Mission française à Tiahuanaco, 14. Am. Kongr. Stuttg. 1904, p. 531). The missing stones are probably now lying for the most part in the fortress-like walls of the church in the neighbouring village of Tiahuanaco. The stone-cutter work on the blocks is excellent. It is possible therefore to rebuild in imagination the wall of the Calasasaya and to get some idea of the rhythm of the four-cornered pillars combined with the regular blocks. The enclosure opens, on the middle of the eastern side, on to a great open stairway, consisting of six monolithic sandstone steps, each 7,75 m broad, which leads down to the lower valley level (Plate 3). In front of the western side of the Calasasaya lies the second, smaller, stone bordered enclosure. Two metres below its inner surface a smooth floor of stone flags was discovered, reached by three steps coloured copper-green. On the flags lay four heavy blocks, hollowed out like sarcophagi, with stone lids. Courty discovered the smallest enclosure to the east of the Calasasaya, at the foot of the great stairs. Its walls consist of sandstone pillars and sandstone masonry without mortar, out of which project human heads in trachyte, greatly weather-worn, but still showing, as beneath a veil, the features. On the day they were excavated reddish-yellow colours were still visible in the eyes and on the lips.

The glory of Tiahuanaco are the gates, each of which is hewn from a single block. The gate of the sun now stands upright in the north-west corner of the Calasasaya, after having lain a long time on top of the collapsed frontal wall. In the upper surface of the outer side a relief is carved (Plate 2). The great work seems to be unfinished.

The reverse side of the gate has a number of niches, the tops of which are widened by a step design. The same motive is repeated in the archway of the gate of the sun and in a second gate which now forms the entrance to a churchyard (Plate 1). Both doors are carved out of a firm, porous lava.

The unfinishedness, already noticeable in the frieze of the gate of the sun, is again met with in the blocks of Puma-Puncu which lies some way off to the south-west of the enclosures. On a terrace of the valley a considerable surface is covered with stone blocks, which give the impression of a ruined palace. The blocks are cut ready for building, but lie around in disorder. The biggest block is 7,75 m long, 4,60 broad and 1,50 thick. In many of the stones are T-shaped grooves for metal brackets, which were to hold the walls together instead of mortar. The niches, with the step motive, determined the architectural form of many surfaces. Red sandstone, lying not far from the site, is broken for the big blocks. Peculiar to Puma-Puncu are stones which are almost daintily chiselled and which, with niches and little steps, look like models. A dark lava is used for these stones which comes from one of the more distant mountains.

Tiahuanaco seems to be richer in monumental sculpture than any of the other art centres in Ancient Peru which we know. Sandstone and lava are also the two stones which were used for statues. A great monolithic figure in the south-west corner of the Calasasaya, the "monk", is of sandstone. The figure is still imprisoned in the block as in a clumsy armour. The face has neither winged eyes nor "tear-furrow" on the cheeks. But the great head of a god, carved in lava, of La Paz (plate 19) has both these features in its face.

The special material for sculpture of the highlands is stone. The block treatment of the stone, the right angles at its corners, the tendency to straight lines, all point to a stratified stone as first material. A volcanic stone can be carved in quite other forms. The stratified stone tends to split along the strata, and must therefore be worked along the surfaces of such splits and at right angles to them. The stone formed of molten lava has no direction and takes every form within its dimensions. Human imagination makes use of material to attain form. Hence the nature of the material constitutes also an element in the creation of form. Similarly the density of the stone is of importance. A loose or porous stone makes miniatures impossible.

The clay head of a jaguar (Plate 15) shows to what an extent actually small objects are given a monumental form in Tiahuanaco. Courty found traces of ultramarine in the eyes of a little jaguar head in lava. One may reasonably ask whether sculpture and relief work in Tiahuanaco were not originally painted. The traces of colour on the lava heads of the "new", eastern stone-bordered enclosure raise the same question. The condor heads in the Tiahuanaco style are conventionalised on architectural lines (Plates 15, 16).



47. Pachacamac, Temple of the Sun (on the height) and Temple of Pachacamac (in front); from a photograph by Mrs. Seler-Sachs



48. Chanchan, clay wall with chess-board pattern; from a photograph by Bandelier, New York; Seler Archive

III

The landscape and climate of the coast were described at the beginning: a narrow, sandy strip at the western foot of the Cordilleras, which frequently receives no rain for years, and where human settlements are only possible in the valleys of the rivers. Under such circumstances there sprang up numerous, little, separate cultures which expressed themselves in as many styles. But just as the landscape is very similar on the whole at all points of the Peruvian coast, so the styles, for all their differences, are all clearly related. Externally this relationship is shown in the general use of clay for modelled and painted vessels, and in the form of airdried bricks for building purposes.

The unfired, air-dried brick is a building material which thoroughly corresponds to the dryness of the coast. It was lasting enough to raise the mighty buildings of Moche, Chanchan and Pachacamac.

On the central coast, on a hill by the sea-shore, lies the ancient temple of the god Pachacamac, surrounded by the ruins of many houses and palaces from which the bricks drop; a desert town half buried in sand (fig. 47). On the summit of the hill stands the temple of the sun, the religious fortress of the Inca. At its foot the Pacific ripples round rock-islands. A little lower than the temple of the sun, in the shadow of the younger and politically more powerful god, lie the ruins of the old temple, the house of Pachacamac.

The architectural principle is that of the step pyramid. That is indeed the great architectural principle of the coast as a whole. To the north, in Moche, it receives clearest form (Plate 12). Out of it is developed in Pachacamac the step terrace, on which the temple is built.

The size of the bricks varies on the whole with the age of the buildings (in this connection, cf. Uhle, Pachacamac, p. 102). The older native buildings have smaller and lighter bricks, the later Inca buildings chiefly great, pressed rectangular blocks. But the size varies also in the same building according to the position of the brick. The temple of the sun has great blocks in the pavement, middlesized ones on the frontal walls of the terraces and small bricks as inner filling. The bricks are bedded in a clay mortar. The walls incline slightly towards the perpendicular axis of the building. This almost visible resistance to the pressure of the roof is in particular the function of inner structures which might be termed buttresses pulling inwards. Stone is not despised, but it is relegated undressed to the foundations, or used for repairing defective walls.

In these ruins the use of stone in the façade seems particularly to reveal the Inca architect, much more accustomed to handling stone than brick. Clay in one form or other was the most important material for the architecture of the coast. Only in a strip of the coast to the west of the black Cordilleras are there walls of undressed granite. The presence of rock does not alone explain the use of this material. For to the North in Moche, the terraces of the Huaca de la Luna are raised at the foot of the rocky Cerro Blanco, and are yet built of brick. The choice of material seems to give a hint as to the origin of the builders: he who uses granite is accustomed to stone, belongs to the mountains. He who employs bricks is a stranger to stone, belongs to the coast. If the Inca architects as men of the highlands nevertheless made use of bricks on the coast, it must be regarded as an adaptation which corresponds to the







living principle of the Inca state. Once however the highlander had decided to employ bricks, he made them at least so big that he could treat them as stone blocks.

Just as the Inca architects tended to make bricks of the size of stone blocks, so they also endeavoured to reproduce the architectural forms of Cuzco in the material of the coast. The trapeze-shaped niche is everywhere cut into the façades like a seal of the Incas, sometimes even in rows. On the third south-west terrace of the temple of the sun the niches are so close together that they resemble short gothic buttresses. The walls were covered with a finely-mixed clay plaster and carefully smoothed. In his excavations Uhle has discovered wall-paintings which may justly be called al fresco.

The convent of the virgins of the sun is separated from the temple of the sun. Its façade faces the "fields of the sun", and contains three great trapeze-shaped niches each with a step motive.

The greatest of the old buildings on the whole coast is the so-called Huaca del Sol near Moche (Plate 12): a great step terrace, on whose surface a step pyramid rises. The whole structure is built of clay bricks. Near it is a similar, smaller building, the Huaca de la Luna, a raised terrace with steep, step-outlined walls, which rests against the rocky Cerro Blanco. In an underground chamber of this shrine the two gold-copper masks shown on Plates 107 and 108 were found, together with other articles. Both buildings seem to have been connected with the worship of the moon. They are walled from the inside outwards, in layers which incline slightly inwards. Half of the Huaca del Sol has been carried away by the river, which treasure hunters diverted against it.

In the neighbourhood of Moche, near Trujillo, lies the great ruin of Chanchan, the capital of the kingdom of the Chimu, which was conquered by the Inca Tupac Yupanqui, the son of the great Pachacutec, 1450 A. D. The ruins have been fully described by G. E. Squier ("Peru", German ed., Leipzig 1883, pp. 163ff.). The buildings were of clay-brick, with walls carefully plastered and frequently coloured (Squier mentions a delicate purple red). On single inner walls broad low reliefs are found which were worked like stucco (Plates 13, 14, fig. 46). In the so-called Hall of the Arabesques in the "Palace", the reliefs cover the upper wall surfaces and resemble heavy tapestries: they are also similar in pattern to old Peruvian textiles. A geometrical arrangement of the surfaces was achieved by raising single bricks. Thus arose the great chessboard and grill walls (fig. 48, 49; cp. also Plate 11). The deeper surfaces still carry fine plaster, which was probably painted.

The pottery of the coast attained two opposed heights: to the south in Nazca, and in the Valle de Chicama in the north. Nazca is poor in modelled forms and rich in strong, brilliant colours (Plates 5—7, 20—39). Chicama is rich in sculptured forms and poor in colour (Plates 57—82). The effect of a Chicama head is not lessened by the lack of colour. Clay was the essential material for sculpture on the coast. Usually the vessels were covered with a very fine white or yellowish ground, which resembles a fine solution of chalk. This is especially characteristic for the pottery of Nazca. Here also



49. Chanchan, clay wall with rhomboid pattern; from a photograph by Bandelier, New York; Seler Archive



50. Head, Valle de Chicama, clay; Greher Coll.; Mus. f. Völkerkde., Berlin

red and black grounds were used on which the freest and most mature paintings appear. The palette is very rich and contains besides the ground colours, white, yellow, red, black, a delicate pale violet, pink, blue-grey and many intermediate tones. Very characteristic is a deep blood-red with a bluish tinge. The colours are marked off with powerful, black outlines. Traces of a preliminary sketch are nowhere to be discovered. The paintings seem to have been put on straight way. Yet there is nothing laborious, nothing remarkably careful about them. The figures are outlined with the greatest freedom and sureness (Plate 20). Even in the bad pieces or those evidently by an unpractised hand the line is carelessly free, and although the figures are occasionally crude or ragged they never show hesitation. The work was probably done from models. But no one piece resembles another in detail. The line is always ready to follow the necessities of the decoration or of the given curved surface. The artist pushes, extends, compresses just as the surface demands, discards attributes, transforms them, gives instead of the object itself a sketch, a hieroglyph of it, is endlessly inventive in that way and almost invariably achieves a good decorative total effect.

The well-preserved pieces show a varnish-like gloss such as is known in Greek vases. It is difficult to say whether it is a real varnish or a film from the colours in the firing or a mechanical smoothing of the vessel. One cannot speak of a glaze. For though the film is very strong, it can be chipped off with a knife. It is also not quite impermeable, for water first forms beads on it, but is then slowly soaked up. Under the magnifying glass numerous little cracks are to be seen similar to those on old paintings. The colours of the glossy vessels are deeper and richer than those of the dull ones. That would again suggest varnish.

The Nazca heads of the Gaffron collection (Plates 40—43) differ in form and technique from all other known Nazca pottery. They are modelled works of powerful form; the colour serves to emphasise the modelled parts. The fragments have with one exception thick sides. The clay when broken is grey inside, red out. The facial colour of the men's heads — with that one exception (Plate 41) — is a fiery burnt sienna, which lies like lacquer on the clay and in many places is peeling off (Plate 43). The features are frequently sharply marked, as though cut, and recall wood-carvings. The heads seem to have been parts of big urns. It would be difficult to consider them as Nazca potteries if the report of the finders (Huaqueros) did not make it necessary. The people are said to be reliable.



51. Trujillo, black clay; relief; river; Mus. f. Völkerkde., Berlin



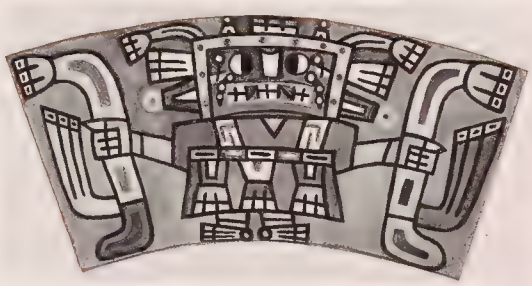
52. Trujillo, black clay, relief; landscape; Mus. f. Völkerkde., Berlin

In their form the typical is emphasised. The heads of the Valle de Chicama are conventionalised individuals; portraits. They still often have the stirrup handle, but can scarcely be considered any longer as vessels. Clay in the form of three dimensional solid sculpture cannot be fired. It would crack. The hollow form is therefore necessary. The steam formed by the firing must escape through openings. Over these openings stirrup handles were fixed, because the heads had earlier originated from jars.

The use of moulds was very wide-spread (fig. 59). Original sculptures are not common. They may be recognised by the numerous traces of the modelling tool which add a strong technical charm to the work (Plates 78, 74 l., fig. 50, 53). From such original works moulds were made, in which the face could be repeatedly cast. Thus the same head can be seen in various collections, only differently coloured and with differently shaped head and neck cloths; for these do not seem to have been taken from a mould. The faces from the moulds are smooth and bear no trace of the modelling hand.



53. Head, Valle de Chicama, clay; Greher Coll.; Mus. f. Völkerkde., Berlin



54. Painting on the clay vessel opposite; copy by Dr. Gaffron, Schlachtensee

TABLE OF PLATES

More than half of the plates, both of tapestry and pottery, have been taken from pieces of the choice Gaffron private collection in Schlachtensee; the whole Nazca series belongs, with one exception, to this collection, as do also the great heads of the Valle de Chicama. All the photographs from this collection show pieces which up till now have nowhere else been published. Similarly, the great majority of the pieces from the rich collections in the museums in Berlin, Munich, New York and London are reproduced here for the first time in large plates.

Photographs by Hanns Holdt, Munich: Plates 15, 25 top, 49, 63, 67, 72 right, 95 top. Photographs of the Linden Museum, Stuttgart: Plates 52, 57 bottom, 58—61, 66, 72 left, 75, 76, 104, 107, 108, 114. Photographs of the American Museum of Natural History, New York: Plates 109, 115, 116, 125, 128. Photographs of the British Museum, London: Plates 69 right, 70 bottom. From a photograph by Mrs. C. Seler-Sachs: Plate 3. Plates 1 and 2 are taken from the atlas of Prof. A. Posnansky, Tiahuanaco, Isla del Sol é Isla de la Luna. From a photograph by Prof. A. Posnansky, La Paz, in the Seler Archive: Plate 19. From photographs by H. Bandelier, New York, in the Seler Archive: Plates 12, 13, 14. From photographs by G. Rozas, Cuzco, in the Seler Archive: Plates 5, 6, 7. From a photograph by A. Gretzer, Hannover: Plate 11. From photographs in the Seler Archive Plates 8, 9, 10; from a photograph in the possession of Dr. Gaffron, Plate 4. Photographs by Dr. H. Doering, Gossfelden: Plates 25 top, 62 top, 74. The photographs for all other plates have been made by Messrs. Ernst Wasmuth, A.-G., Berlin.

Abbreviations: H. = Height; L. = Length; D. = Diameter. G. C. S. – Gaffron Private Collection, Berlin-Schlachtensee.



COLOURED PLATES



55. Pachacamac, clay vessel; Gaffron Coll., Schlachtensee

Plate I. Nazca, bag-like double tapestry; Gaffron Coll., Schlachtensee; 31 × 22 cm.

Plate II. Nazca, Embroideries on a loose base fabric; G. C. S.; single figure 18,5 × 12 cm.; section of the fabric reproduced on Plate 114.

Plate III. Nazca, Poncho, Tiahuanaco style; G. C. S.; 118 × 110 cm.

Plate IV. Nazca, Poncho, Tiahuanaco style; G. C. S.; a whole poncho: 110 × 104 cm.; section, about 80 × 58 cm.

Plate V. Nazca, Clay vessel; G. C. S.; mythical figure with skull; H. 14,3 cm.; D. 16,7 cm.

Plate VI. Nazca, Clay vessel; G. C. S.; coiled snakes, cat-like animals; H. 19,8 cm.; D. 15,6 cm.

Plate VII. Nazca, Painting on the clay vessel of Plate 20; G. C. S.

Plate VIII. Pachacamac, Kelim fabrics, G. C. S.; upper piece 30,5 × 29,5 cm.; lower piece, so-called birth scene, 34 × 34 cm.

Plate IX. Pachacamac, Breast ornaments, mother-of-pearl inlays on shell, legs coloured stone, head ornament silver, oxidized; two ornamental plates on ear-blocks, inlaid; with mother-of-pearl; G. C. S.; natural size.

Plate X. Chancay, Kelim fabric; G. C. S.; 78 × 45 cm.

Plate XI. Top: Nazca, Kelim fabric; G. C. S.; 56 × 44 cm. Bottom: Marquez; G. C. S.; 66 × 44 cm.

Plate XII. Nazca, Feather cloak; G. C. S.; 85 × 85 cm.

COLLOTYPE PLATES

ARCHITECTURE

A. Architecture of the Puna. Generally in hewn blocks. Wall pillars, preference for big stones; instead of mortar copper brackets.

Plate 1. Tiahuanaco, gate, monolith, lava; H. 2,10 (Middendorf, Peru III, p. 380). Lintel of the reverse side, decorated with relief work, similar to the meander of the frieze of the following plate.

Plate 2. Tiahuanaco, part of the frieze of the Gate of the Sun, lava, divinity (middle figure of the frieze) and adoring followers. H. of the frieze 82 cm (Middendorf, Peru III, S. 385).

Plate 3. Tiahuanaco, great sandstone steps, eastern side of Calasasaya, width of step 7,75 m.

Plate 4. Sillustani on the Umayo lake, to the west of lake Titicaca, a grave tower (chullpa); diameter increased towards the top; lava; inside, grave chambers.

B. Architecture of the upland valleys. In the sphere of Cuzco development of the many-cornered block to the regular rectangular block. Special position of Ollantaytambo. The giant blocks treated in this manner are not typical of Cuzco.

Plate 5. Ollantaytambo, fortress in the Urubamba valley; reddish porphyritic granite.

Plate 6. Ollantaytambo, top of the fortress; reddish porphyritic granite; block to the right 4 × 2,12 m.; average size of blocks about 1,10 m.

Plate 7. Ollantaytambo, well; "Bath of the Princess".

Plate 8. Cuzco, Callejon de Loreto; blackish lava; to the left court of the snakes, palace of the Inca Huayna Capac, to the right the convent of the Sun-virgins.

Plate 9. Rodadero near Cuzco opposite the fortress Sacsahuaman, "throne of the Inca"; in the living rock, hewn steps and seats.

Plate 10. Rajchi near Cacha on the Raya Pass, temple of the Huiracocha, base wall lava hewn blocks, H. 3 m. Above that clay-brick wall, total H. 15 m.

C. Architecture on the coast. Material chiefly clay bricks of different sizes.

Plate 11. Huaca de la Legua near Lima; clay brick; relief ornament (similar to textile patterns, see Plate 126), made by projection of single large bricks.

Plate 12. Huaca del Sol near Moche; south side; step terrace with step pyramid on top; brick; length of the south side 136 m., of the east side 221 m. Height of the terrace 18 m., of the pyramid 23 m. Total height 41 m.

Plate 13. Chanchan, ruins by Trujillo, Hall of the Arabesques; stucco-like ornament on brick walls.

Plate 14. Chanchan, stucco-like ornament on brick walls.

MODELLED WORK IN CLAY, STONE AND WOOD. VASE-PAINTINGS. GOLD AND SILVER WORK

Plate 15. Top: Tiahuanaco, head of jaguar, part of a vessel in the form of a jaguar (fig. 14). Clay, reddish coloured painting; Posnansky Coll., Mus. f. Völkerkde., Munich; height of vessel 17,7 cm.
Bottom: Tiahuanaco, head of condor, fragment; clay; Posnansky Coll., Mus. f. Völkerkde., Munich.

Plate 16. Top: Tiahuanaco, large vessel with jaguar head and paintings; clay; Mus. f. Völkerkunde, Berlin, V. A. 16 704; painted figure, orange; H. 26,9 cm.
Bottom left: Tiahuanaco, head of condor, clay, Hettner Coll., Mus. f. Völkerkde., Berlin, V. A. 10 592; H. 8,2 cm.
Bottom right: Tiahuanaco, jaguar head, fragment, clay, Mus. f. Völkerkde., Berlin, V. A. 12 291. H. 9 cm.

Plate 17. Ancoraimes, head (vessel); clay; Mus. f. Völkerkde., Berlin, V. A. 12 358; H. 15 cm. front and side views.

Plate 18. Sampaya, thick stone mortar in form of head; Mus. f. Völkerkde., Berlin, V. A. 11 816; H. 11,5 cm.; front and side view.

Plate 19. Tiahuanaco, large lava head, fragment of a statue, La Paz, height roughly breast high of a middle-sized man.

Plate 20. Nazca, Aucallama, clay vessel, painting on Plate VII; G. C. S.; H. 12 cm.
Bottom: Nazca, clay vessel; G. C. S. colibri over conventionalised branches or blossom; bird blood red, dark orange, black and white, branch blood-red, white ground. H. 9,5 cm.

Plate 21. Top: Nazca, clay vessel; G. C. S.; colibri; handles painted as blossom, orange and blood-red; bird blood-red, brick-red, blue-grey; white ground. H. 16 cm.
Bottom: Nazca, deep painted clay dish; G. C. S., frieze of skulls, cp. Plate 39; H. 9,8 cm.

Plate 22. Nazca, clay vessel, four fruit representations; G. C. S.; H. 15,2 cm.

Plate 23. Nazca, clay vessel; G. C. S.; vessel stands on its mouth, bored through bottom; H. 24 cm.



56. Chancay, large clay figure; Linden Museum, Stuttgart

Plate 24. Nazca, clay vessel; G. C. S.; black brown wreaths, leaves and blossom calices; blossom tips light brownish red on white ground through which a pale violet shines; H. 16,7 cm.

Plate 25. Top: Nazca, light clay vessel with black stripe and dots; G. C. S.; H. 10,8 cm.
Bottom: Nazca, light clay vessel with black step ornament; Gaffron Coll., Mus. f. Völkerkde., Munich; H. 7,5 cm.

Plate 26. Nazca, clay vessel in form of a cactus; G. C. S.; H. 17,5 cm.

Plate 27. Top: Nazca, fish, clay; G. C. S.; H. 16,5 cm.
Bottom: Nazca, bird, clay; G. C. S.; H. 16,7 cm.

Plate 28. Top: Nazca, clay vessel; G. C. S.; mythical bird creature, blowing pan's pipes; H. 9,1 cm.
Bottom: Nazca, clay vessel; G. C. S.; spirit figure, spider-like (Uhle, Frühkulturen b. Lima); H. 6,7 cm., D. 14,7 cm.

Plate 29. Left: Nazca, clay vessel; G. C. S.; mythical being with skulls; H. 16,2.
Right: Nazca, clay vessel; G. C. S.; 2 small relief figures (man and woman?) sides and back wall mythical beings on red ground; H. 14,7 cm.

Plate 30. Nazca, clay vessel; G. C. S.; mythical being with men bringing sacrifice (?); two views; H. 16,8 cm.

Plate 31. Nazca, clay vessel; G. C. S.; mythical figure, intertwined; H. 21 cm.

Plate 32. Nazca, clay vessel; G. C. S.; cat-like being, the "food-bringer" adorned with fruit; H. 26 cm.

Plate 33. Left: Nazca, clay vessel; G. C. S.; horizontal (flying?) human figure with throwing stick, costume decorated with skulls; H. 18,4 cm.
Right: Nazca, clay vessel; G. C. S.; colour sequence: brick-red, pale-yellow, reddish-yellow, blood-red, brick-red, and so on; each colour bordered by brown-black; white interlinings; H. 19 cm.

Plate 34. Left: Nazca, clay vessel; G. C. S.; running human figure with feathered staff; black ground; underneath a frieze: skulls with blood; H. 21,8 cm.
Right: Nazca, double vessel, clay; G. C. S.; running human figure with feathered staff; red ground; H. 18 cm.

Plate 35. Left: clay head vessel; G. C. S.; H. 20 cm.
Right: Nazca; small clay head vessel; G. C. S.; H. 11,4 cm.

Plate 36. Nazca, crouching female figure, clay; G. C. S.; white ground, black painting; in the hair red ribbons; red dotted bracelets; H. 16 cm.

Plate 37: Nazca, mythical bird-man, clay; G. C. S.; H. 27,5 cm.

Plate 38. Nazca, head of a large clay vessel; G. C. S.; face blood-red; H. 14 cm. (total height of vessel 43 cm.).

Plate 39. Nazca, clay vessel, decapitated head; G. C. S.; lips pinned together, in forehead string for carrying, under side white with red blood stains; H. 15, L. 19 cm.

Plate 40. Left top: Nazca, small head of llama in clay; fragment; G. C. S.; yellow-brown; H. 9,3 cm.
Right top: Nazca, small head of llama, clay; fragment; G. C. S.; yellow-brown; H. 9 cm.
Bottom: Nazca, clay head of llama; fragment; G. C. S.; black, lips and ears red inside; H. 8,8 cm.; front and side view.



57. Recuay, group on a clay vessel; Linden Museum, Stuttgart

Plate 41. Nazca, fragment of a clay head; G. C. S.; yellow-grey ground, coloured geometrical pattern; H. 8,6 cm.; 2 views.

Plate 42. Nazca, fragment of a clay head; G. C. S.; facial colour burnt sienna, lacquer-like; H. 19,2 cm.

Plate 43. Nazca, fragment of a clay head; G. C. S.; facial colour burnt sienna, lacquer-like, peeling in places; H. 16 cm.; thickness at bottom 10—13 mm.

Plate 44. Nazca, clay head, fragment; G. C. S.; facial colour, burnt sienna; H. 20,2 cm. Front and side views.

Plate 45. Top: Ica, clay vessel; Mus. f. Völkerkde., Berlin, V. A. 16 497; H. 9,8, D. 16,6 cm. Bottom: Ica, clay vessel; Mus. f. Völkerkde., Berlin, V. A. 14 122 and V. A. 16 436; height of both 6,5 cm.

Plate 46. Pachacamac, tortoise (clay vessel); Gretzer Coll., Mus. f. Völkerkde., Berlin, V. A. 49 520; H. 10,3 cm, L. 14,9 cm. Two views.

Plate 47. Chancay, wooden casket with carvings; G. C. S.; H. 8,3 cm, L. 18,8 cm. Bottom: Lid of casket.

Plate 48. Left: Pachacamac, clay vessel; Gretzer Coll., Mus. f. Völkerkde., Berlin; H. 17,3 to 17,6 cm.
Right: Pachacamac, clay vessel; Baessler Coll., Mus. f. Völkerkde., Berlin; H. 17,6 cm.

Plate 49. Pachacamac, group carved in wood; Gaffron Coll., Mus. f. Völkerkde., Munich, G. 3171; light wood inlaid with shells; H. 24 cm.

Plate 50. Left: Nieveria, clay vessel with modelled ornament; mother suckling; G. C. S.; H. 18,4 cm.
Right: Nieveria, vessel with tortoise; G. C. S.; orange ground, blood-red ornament; tortoise red-brown above, yellow beneath; fine, light clay; H. 16,7 cm.

Plate 51. Left: Chancay, large clay figure; Macedo Coll., Mus. f. Völkerkde., Berlin, V. A. 3897. Right: (probably) Chancay, clay double vessel, so-called "Chiflador"; Renner Coll., Mus. f. Völkerkde., Berlin, V. A. 594; H. 29,2 cm; when the vessel, filled with water, is tipped back and forward, the air escapes through the breast of the bird and streams in again; in this way a clear whistling sound is produced; see also fig. 14; there the air produces a sighing and sobbing sound. Such water effects were very popular on the coast.

Plate 52. Chancay, fragment of a large clay vessel; Lindenmus., Stuttgart 53 254; mythical figure; height of fragment 32 cm.

Plate 53. Recuay, sitting warrior, clay; Mus. f. Völkerkde., Berlin, V. A. 4731; H. 22,2 cm. Front and side view.

Plate 54. Left: Recuay, animal with wild animal's fangs and crown; clay; Ferreyros Coll., Mus. f. Völkerkde., Berlin, V. A. 751; H. 24,4 cm.
Right: Recuay, player on pan's pipes with llama, clay; Macedo Coll., Mus. f. Völkerkde., Berlin, V. A. 4796; H. 20,1 cm.

Plate 55. Top: Recuay, pair of birds, clay; Ferreyros Coll., Mus. f. Völkerkde., Berlin, V. A. 750; H. 16 cm.
Bottom: Recuay, half-shut clay vessel with handle; Macedo Coll., Mus. f. Völkerkde., Berlin, V. A. 4853; yellowish ground, black and red ornaments; D. 27,1 cm. (with handle).

Plate 56. Recuay, clay vessel; Macedo Coll., Mus. f. Völkerkde., Berlin, V. A. 4776; two views.

Plate 57. Top: Valle de Chicama, head of a puma, clay, fragment; G. C. S.; H. 11,4 cm. Bottom: Huacho; puma head as mouth of clay trumpet; Lindenmus., Stuttgart,



58. Chancay, guinea-pig, clay; Linden Museum, Stuttgart





L. 1039/710; length of the section 17 cm., total length 38,5 cm. These trumpets give a loud, almost vibrating tone.

Plate 58. Left: Valle de Chicama, lying seal with young, black clay; Lindenmus., Stuttgart, L. 1039/529; H. 18,5 cm.
Right: Chimbote; sitting bird (owl?), clay; Lindenmus., Stuttgart, F. I. 88; H. 15 cm.

Plate 59. Trujillo, duck, clay; Lindenmus., Stuttgart, F. IV, 222; H. 11,5 cm.

Plate 60. Chimbote, bat on a fruit, clay; Lindenmus., Stuttgart; bat Indian red, as though lacquered, fruit white-yellow; H. 21,5 cm. (without handle).

Plate 61. Valle de Chicama, sitting bird with snake in its claws; lid of vessel; black clay; Lindenmus., Stuttgart, F. II, 3; height (of the bird) 17 cm., total vessel 28,5 cm.

Plate 62. Top: Valle de Chicama, tortoise, clay, back decorated with fruit branches; back feet with tortoise; G. C. S.; H. 23 cm (without handle).
Bottom: Valle de Chicama, deer-snake, Mexican: mazacoatl, clay; Mus. f. Völkerkde., Berlin, V. A. 18 223; H. 18,7 cm (antlers); L. 26 cm.

Plate 63. Chimbote, mythical figure with pointed hat and large clawed feet on snail shells, clay; Gaffron Coll., Mus. f. Völkerkde., Munich, G. 922; H. 22 cm.

Plate 64. District of Trujillo, two demon and two animal heads over a cross; clay; Mus. f. Völkerkunde, Berlin, Renner Coll., V. A. 592; surface Indian red, like polished stone; H. 27,2 cm.

Plate 65. Trujillo; sitting dead figure or cripple, playing a tambourine-like instrument, clay. On frieze, similar figures with pan pipes and great pitchers, above them a star (morning star?); Macedo Coll., Mus. f. Völkerkde., Berlin, V. H. 4676; H. 25,5 cm.

Plate 66. "Lima, from graves", hand in large-grained dark grey clay; Lindenmus., Stuttgart; H. 15 cm.; two views.

Plate 67. Valle de Chicama, arm in dark grey-yellow clay; Mus. f. Völkerkde., Munich, 20 –2 -2; L. 33 cm.
Above: Part view of the same piece; hand with fingers drawn together in a curious manner; similar position in two hands carved in bone; one formerly in the possession of Dr. Gaffron, Schlachtensee, the other in the British Museum; both inlaid with turquoises (cp. Joyce, Americ. Anthropol. N. S. X, 1908, p. 16—23).

Plate 68. Left: Chimbote, crouching figure with wrinkled face, clay; Gaffron Coll., Mus. f. Völkerkde., Munich, G. 920; H. 22 cm.
Right: Valle de Chicama, Hacienda Roma; sitting figure, clay; Mus. f. Völkerkde., Munich, 20—2—2; H. 19 cm.

Plate 69. Left: Chimbote, crouching figure, clay; Lindenmus., Stuttgart, F. I, 90; H. 19,5 cm.
Right: Valle de Chicama; large clay figure (vessel); British Museum, London; gift of Mr. v. d. Bergh; H. 17,8 ins.

Plate 70. Top: Valle de Chicama, group, family with llama; black clay; G. C. S.; H. 19,3 cm.
Bottom: (probably) Valle de Chicama, head of a llama, black clay; British Museum, London.

Plate 71. Left: Valle de Chicama, crouching blind man, clay; G. C. S.; H. 18,6 cm. (without handle).
Right: Valle de Chicama; crouching blind man, clay; face, hand, hair unpainted; G. C. S.; H. 16 cm. (without handle).

Plate 72. Left: Chimbote, profile of a small clay head, section; Lindenmus., Stuttgart, F. I, 90; H. 14 cm.
Right: Chimbote, head of a blind man, part view of a clay vessel; Gaffron Coll., Mus. f. Völkerkde., Munich; G. 907; H. 21 cm.

Plate 73. Left: Valle de Chicama, clay head; G. C. S.; middle of face and neck unpainted; H. 26 cm.



59. Chancay, model; Linden Museum, Stuttgart

Right: Valle de Chicama, clay head; G. C. S.; H. 26,1 cm.

Plate 74. Left: Valle de Chicama, clay head; G. C. S.; H. 16,5 cm. (without handle).
Right: Valle de Chicama, clay head, with feather rosette (?); G. C. S.; H. 17,7 cm. (without handle).

Plate 75. Left: Chimbote, clay head; Lindenmus., Stuttgart; H. 17 cm. (without handle).
Right: Chimbote, clay head, profile; Lindenmus., Stuttgart; H. 19 cm.

Plate 76. Left: Chimbote, clay head, profile section; Lindenmus., Stuttgart; H. 18 cm.
Right: Chimbote, clay head, profile section; Lindenmus., Stuttgart; H. 16 cm.

Plate 77. Valle de Chicama; woman's head in clay; unpainted; G. C. S.; H. 29,3 cm.

Plate 78. Valle de Chicama, head of a one-eyed man, clay; face and neck unpainted; G. C. S. traces of the modelling instruments clearly noticeable; apparently an original work; H. 29 cm.

Plate 79. Valle de Chicama, large clay head, open above; G. C. S.; H. 21 cm.

Plate 80. Valle de Chicama, large head in clay; face and neck unpainted; G. C. S.; H. 21,6 cm.

Plate 81. Valle de Chicama, large clay head, face unpainted; G. C. S.; H. 28 cm.

Plate 82. Trujillo, head of a large, broad jar, face tatooed; Lindenmus., Stuttgart; H. 13 cm., whole jar 32 cm.

Plate 83. Valle de Chicama, deep chalice-like vessel, clay; G. C. S.; foot hollow; H. 18,7 cm., D. 26,5 cm.

Plate 84. Left: Valle de Chicama, seal hunt, clay; G. C. S.; at bottom sea waves; H. 22,5 cm.
Right: The same vessel from the other side; animals fleeing to water, waves to left.

Plate 85. Valle de Chicama, dying warrior and jaguar; below plants; clay; G. C. S.; H. 30,5 cm.

Plate 86. Valle de Virú, girdle-animal with head of wild animal; cp. fig. 60; G. C. S.; form of vessel and curve of handles curious; H. 30,8 cm.

Plate 87. Left: Chimbote, clay vessel in the shape of a fruit; Lindenmus., Stuttgart; H. 32 cm.
Right: Trujillo, dainty black clay vessel with little birds; Lindenmus., Stuttgart; foot of vessel hollow; H. 25,5 cm.

Plate 88. Left: Cajamarca, clay head, pigtailed hair; Macedo Coll.; Mus. f. Völkerkde., Berlin, V. A. 3769.
Right: Cuzco, clay head with pointed hat; Mus. f. Völkerkde., Berlin, V. A. 8039; H. 29 cm.

Plate 89. Left: Cuzco, amphora, clay, decorated with heather blossom; Centeno Coll., Mus. f. Völkerkde., Berlin, V. A. 8066; H. 20 cm.
Right: Cuzco, amphora, clay; Renner Coll., Mus. f. Völkerkde., Berlin, V. A. 583; H. 16,2 cm.

Plate 90. Top: Cuzco, small clay amphora with painted heather blossom; Centeno Coll., Mus. f. Völkerkde., Berlin, V. A. 8078.
Bottom: Cuzco, painting on a large amphora; Mus. f. Völkerkde., Berlin, V. A. 7896.

Plate 91. Top: Cuzco, clay vessel; Centeno Coll., Mus. f. Völkerkde., Berlin, V. A. 8078.
Bottom left: Small amphora painted with insects; Centeno Coll., Mus. f. Völkerkde., Berlin, V. A. 7909; H. 18,2 cm.
Bottom right: Small amphora painted with birds; Ferreyros Coll., Mus. f. Völkerkde., Berlin, V. A. 671; H. 14,7 cm.

Plate 92. Cuzco, large amphora, clay; Mus. f. Völkerkde., Berlin, V. A. 7893; H. 85 cm.
Bottom: Cuzco, painting of a large amphora; Mus. f. Völkerkde., Berlin, V. A. 7896.



60. Valle de Viru, drawing on the clay vessel of Plate 86; Gaffron Coll., Schiachtensee

Plate 93. Cuzco, neck of a large amphora, clay; Lindenmus., Stuttgart; F. I, 105; H. 13 cm.; whole amphora 38,5 cm.

Plate 94. Cuzco, clay vessel with paintings; left two jaguars, right blossoming plant; loose rattling ball in the hollow base; Centeno Coll., Mus. f. Völkerkde., Berlin, V. A. 8110; H. 14,5 cm.

Plate 95. Top: Cuzco, light clay vessel; Mus. f. Völkerkde., Munich.
Bottom left: Painted clay plate, Qalang'aci (Bolivia); Mus. f. Völkerkde., Berlin, V. A. 12 621; D. 17,4 cm.
Bottom right: Carabuco (Bolivia), painted clay plate; Mus. f. Völkerkde., Berlin, V. A. 12 438; D. 15 cm.

Plate 96. Top: Ica, clay plate with painting and relief work, snails; Gretzer Coll., Mus. f. Völkerkde., Berlin, V. A. 51 148; D. 15,1 cm.
Bottom: Ica, clay plate with knob handle and paintings (fish and insects); Gretzer Coll., Mus. f. Völkerkde., Berlin, V. A. 51 149; D. 23,5 cm.

Plate 97. Nazca, flat clay dish, knob handle and painting; G. C. S.; D. 23,4 cm.

Plate 98. Cuzco, dark clay dish with double bottom, fish in relief; Mus. f. Völkerkde., Munich, 14—6—1; D. 23 cm.
Bottom: Clay vessel with fish in relief; Centeno Coll., Mus. f. Völkerkde., Berlin, V. A. 8034; D. 24,2 cm.

Plate 99. Top: Cuzco, snake dish, serpentine stone; Macedo Coll., Mus. f. Völkerkde., Berlin.
Bottom: Cuzco, snake-dish, serpentine stone; Macedo Coll., Mus. f. Völkerkde., Berlin, V. A. 4252; D. 33,9 cm.

Plate 100. Stone dish, with maize bearers, serpentine stone; Macedo Coll., Mus. f. Völkerkde., Berlin, V. A. 5007; D. 32,4 cm.
Bottom: Single maize bearers.

Plate 101. Cuzco, deep stone dish encircled by snakes, dense volcanic stone; Mus. f. Völkerkde. V. A. 8400; D. 19,6 cm.

Plate 102. (Probably) Cuzco, stone syrinx; American Museum of Natural History, B/1715, plaster cast.

Plate 103. Ica, large beaten gold cup; G. C. S.; H. 17 cm.

Plate 104. Left: Ica; arm cuff with hammered relief work, gold; Sutorius Coll., Stuttgart; H. 11 cm.
Right: Ica; Arm cuff, with knobs soldered on, gold; Sutorius Coll., Stuttgart; H. 14,5 cm.

Plate 105. Top left: Gold step cup; G. C. S.; H. 7,3 cm.
Top right: Beaten gold cup; G. C. S.; H. 6,5 cm.
Bottom: 2 golden breast bowls; G. C. S.; H. 5 cm. Compare pieces from Imbabura, Larrea, Bol. Soc. Equat. II, 5, Quito, 1919, Plate V, 4, 5, ad pag. 216.

Plate 106. Top: Ica, bird in beaten relief, gold, to be sewn on a robe; G. C. S.; actual size.
Bottom: Ica; 2 pairs of colibri, gold, ear ornaments; G. C. S.; actual size.

Plate 107. Huaca de la Luna near Moche, beaten mask, gold and copper alloy, eyes inlaid shells, oxydised; Sutorius Coll., Stuttgart; H. 26 cm.

Plate 108. Huaca de la Luna, near Moche, animal head, gold and copper alloy, three parts, teeth of shell; Sutorius Coll., Stuttgart; L. 25 cm.



61. Chimbote, drawing on a clay vessel; Linden Museum, Stuttgart

Plate 109. Top: Titicaca Island, silver llama, with golden ornament on back; American Museum of Natural History, New York, B/1618; H. $9^1/_8$ ins.
Bottom: Silver llama; American Museum of Natural History, New York; B/1619; H. $9^1/_{16}$ ins.

TEXTILES

Plate 110. Nazca, bag; G. C. S.; 19 × 18,5 cm. Front and back view.
Plate 111. Top: Nazca, kelim textile; G. C. S.; 90 × 24 cm.; section 45 × 24 cm.
Bottom: Nazca, border (birds? as pattern); G. C. S.; 45 × 8 cm.
Plate 112. Top: Nazca, fine textile, Tiahuanaco style; G. C. S.; 79 × 45 cm.
Bottom: Nazca, fine textile, Tiahuanaco style; G. C. S.; 69 × 43 cm.
Plate 113. Top: Ica, kelim textile; G. C. S.; 30 × 40 cm.
Bottom: Ica, textile with special warp and special weft; Gaffron Coll., Mus. f. Völkerkde., Munich, G. 2185; $^5/_6$ natural size.
Plate 114. Nazca, large embroidered fabric, cp. Plate II; Lindenmus., Stuttgart; gift of Mr. Sutorius; 90 × 240 cm.
Plate 115. (Probably) Ica, embroidery, mythical (ape?) figures; American Museum of Natural History, New York, 37 341; 104 × 40 ins.; section 8 ins.
Plate 116. Ica, embroidery, mythical bird figures; American Museum of Natural History, New York, 41,0/1508; 80 × 45 ins.; section $5^1/_2 \times 5^3/_8$ ins.
Plate 117. Pachacamac, Poncho, double woven, white and red; Mus. f. Völkerkde., Berlin, V. A. 21231; 64 × 55 cm, section 42 × 30 cm. Views of both sides.
Plate 118. Pachacamac, 4 kelim textiles; G. C. S.; 21 × 13, 22 × 12, 18 × 11,3, and 18 × 11 cm.
Plate 119. Pachacamac; Top: fabric on a loose base, swastika; G. C. S.; 41 × 27 cm.
Bottom: Kelim textile mythical figures; G. C. S.; 80 × 180 cm.
Plate 120. (Probably) Pachacamac, kelim fabric; earlier G. C. S.
Plate 121. Pachacamac; top: kelim textile, fish, appliqué; G. C. S.; 49 × 27,5 cm.
Bottom: Pachacamac, Kelim textile, plants and animals; G. C. S.; 35 × 33 cm.
Plate 122. Pachacamac, kelim textile with outlines later traced with thread; Mus. f. Völkerkde., Berlin; V. A. 57031; 45,5 × 29 cm.
Plate 123. Top: Pachacamac, kelim textile; Mus. f. Völkerkde., Berlin; V. A. 57033; 22 × 13 cm.
Bottom: Pachacamac, kelim textile; American Museum of Natural History, New York, B/934; 21 × 10 ins.
Plate 124. Left: Pachacamac, painted fabric; G. C. S.; 58 × 46 cm.
Right: Pachacamac, painted fabric; Mus. f. Völkerkde., Berlin, V. A. 60072; 154 × 73 cm.



62. Lambayeque, clay heads; E. Brüning Coll., Chiclayo; from a photograph in the Seler Archive



Plate 125. Top: Pachacamac, poncho, kelim textile, warp cotton, weft vicuña wool; American Museum of Natural History, B/7781; 19 × 24 ins.
Bottom: Pachacamac, narrow ribbons; American Museum of Natural History, 104498.
Plate 126. Chancay, kelim textile with fringe; G. C. S.; 54 × 35 cm.
Bottom: Marquez, kelim textile with fringe; G. C. S.; 56 × 39 cm.
Plate 127. Chancay; left: kelim textile; G. C. S.; 64 × 33 cm.
Right: Chancay, Kelim textile; G. C. S.; 78 × 34 cm.
Plate 128. Titicaca Island, poncho, Spanish influence noticeable; found in a stone box; American Museum of Natural History, New York, B/1500, $38^1/_2$ × 37 ins.

LIST OF RECENT AND IMPORTANT PUBLICATIONS

Ambrosetti, J. B., Un documento gráfico de Etnogr. Peruana de la Epoca colonial. Buenos Aires 1910, Publ. Secc. Antrop. No. 8.

Angrand, L., Les antiquités de Tiahuanaco et l'origine présumable de la plus ancienne civilization du Haut Pérou. Paris 1866. 4°.

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63. Valle de Chicama, small clay head; Gaffron Coll., Schlachtensee

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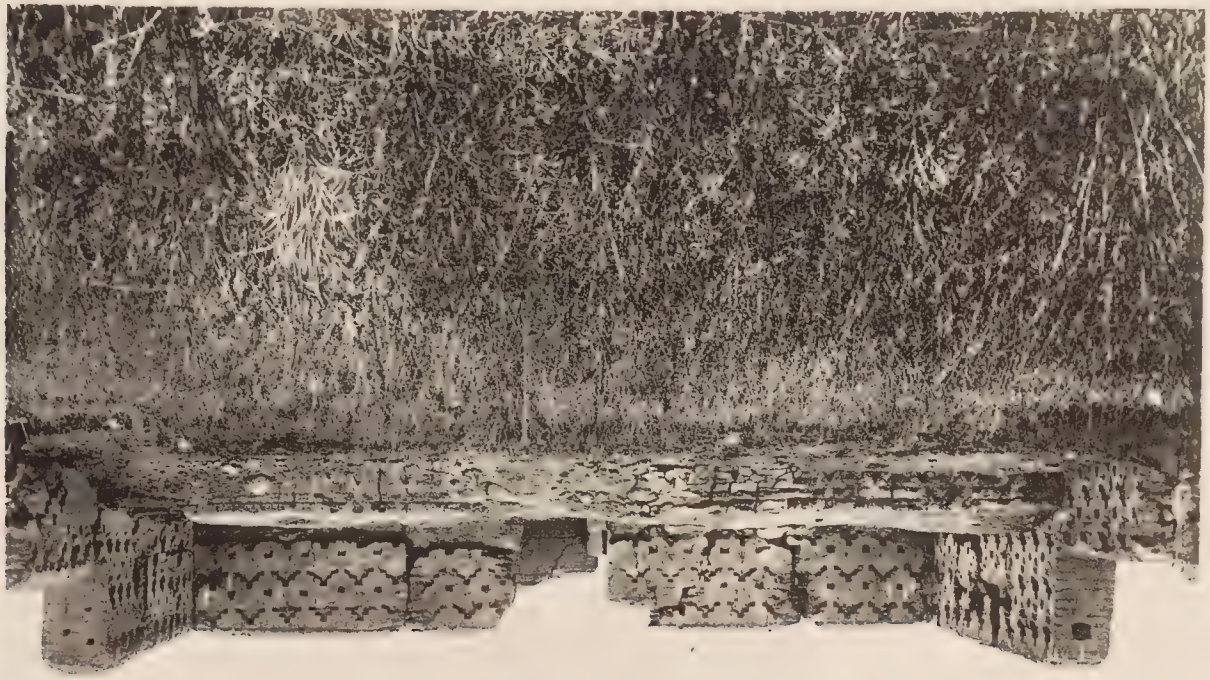


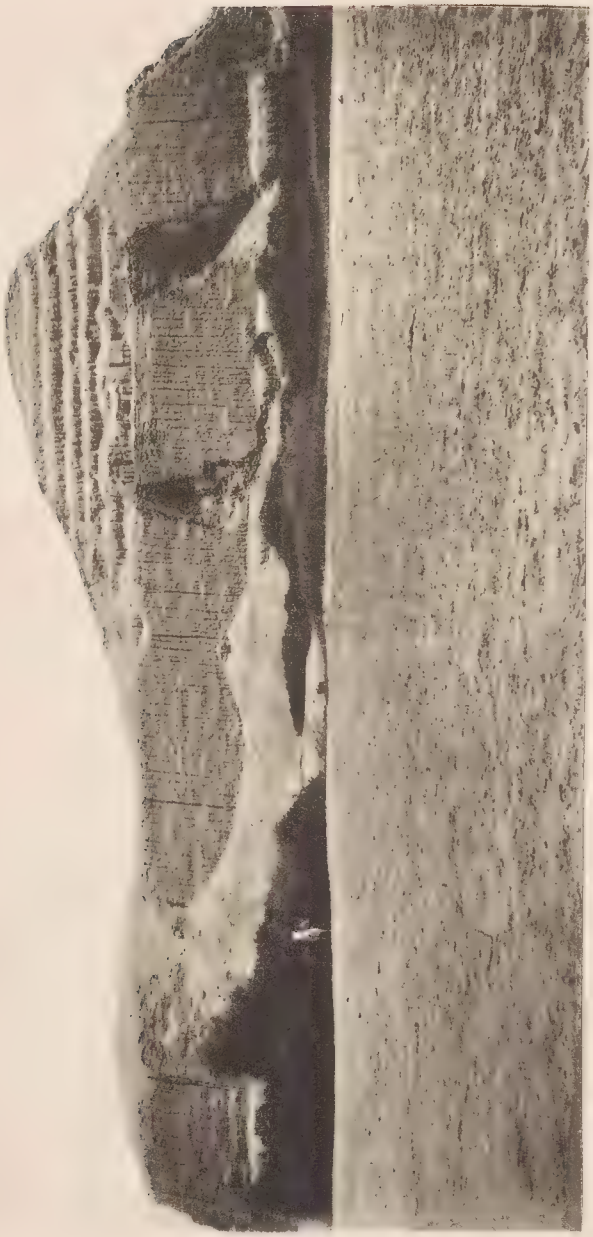








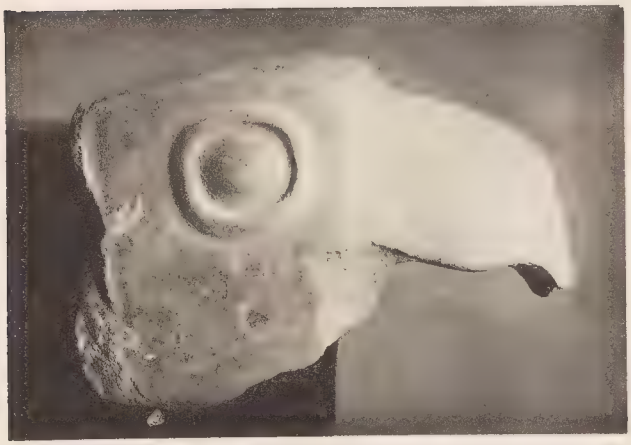






























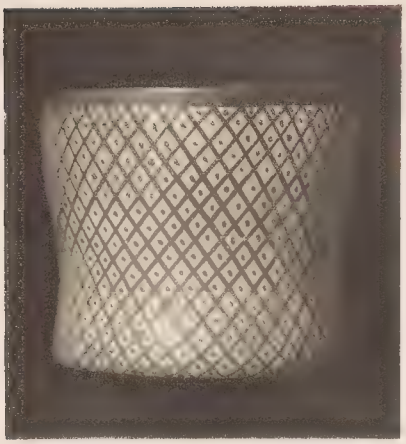


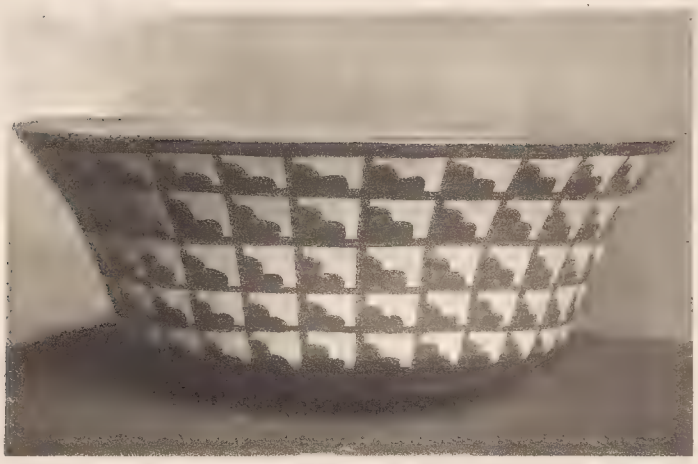




















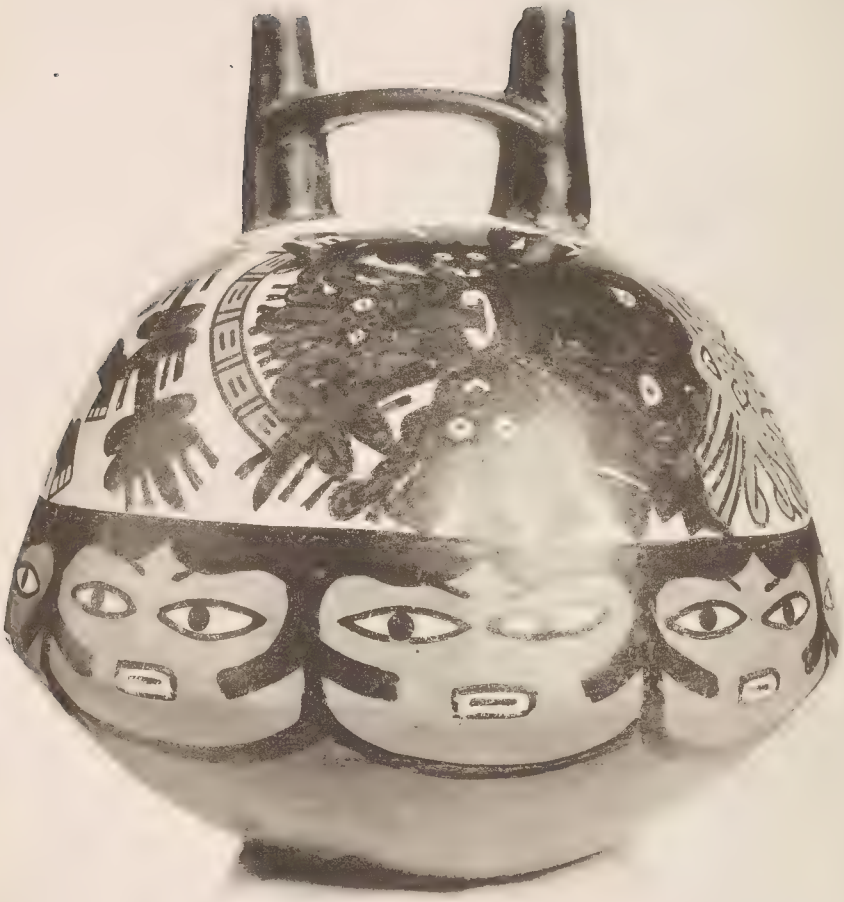




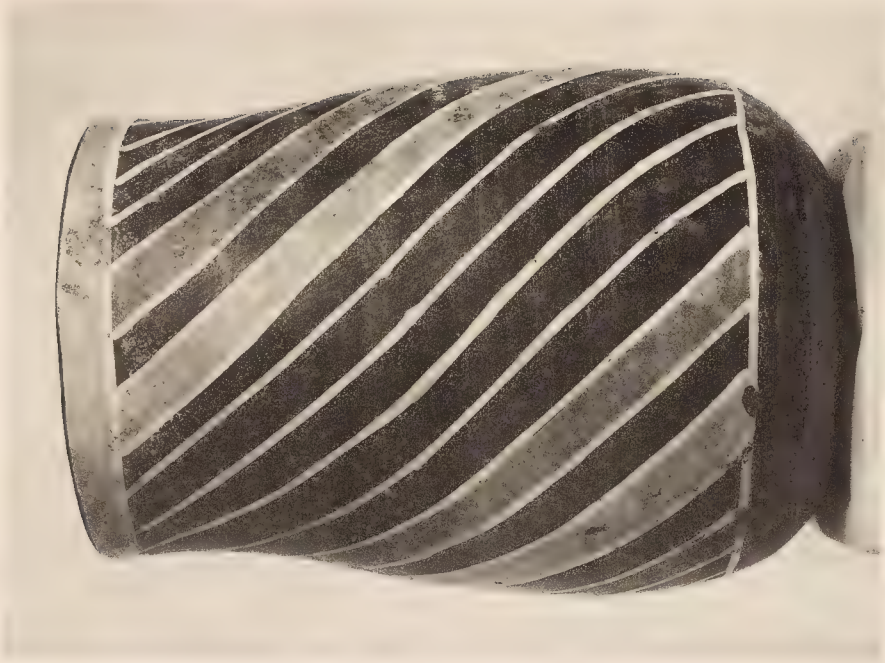




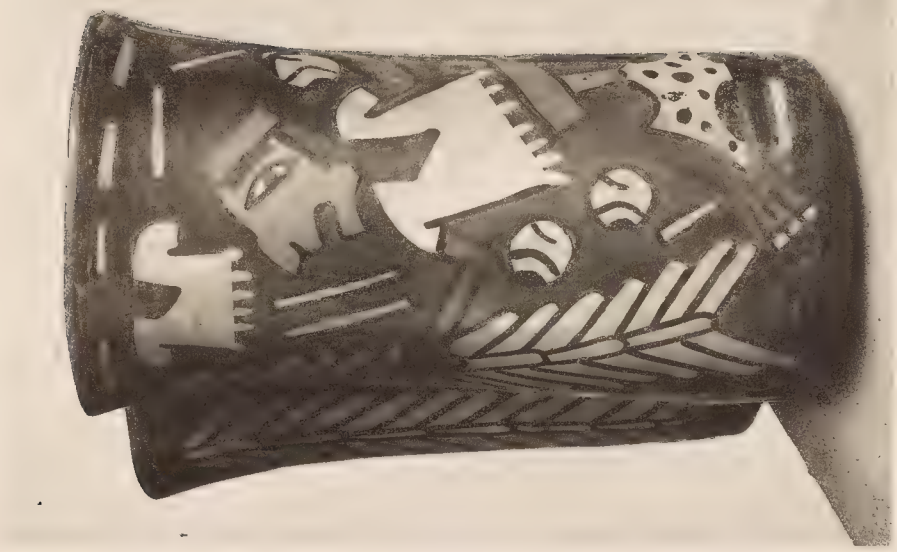






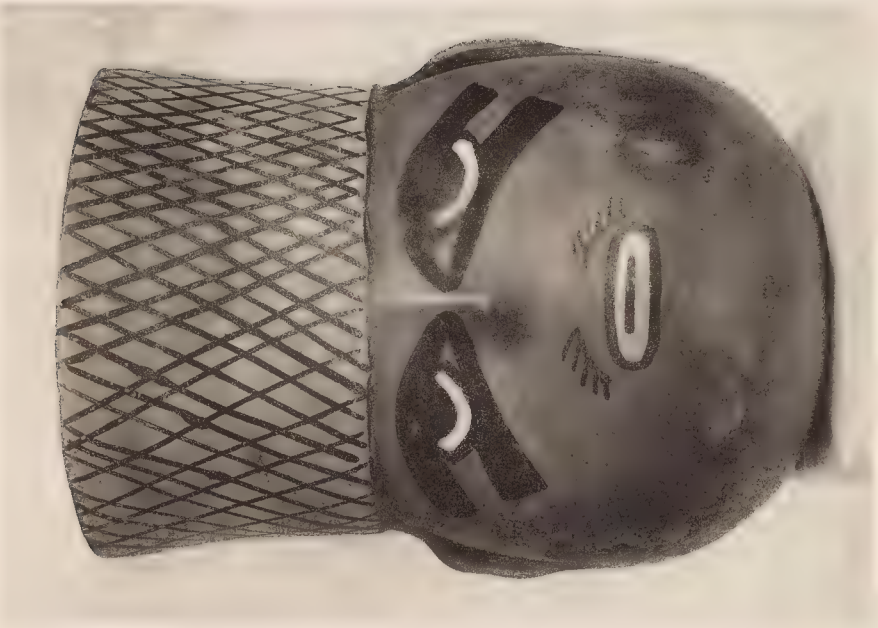


















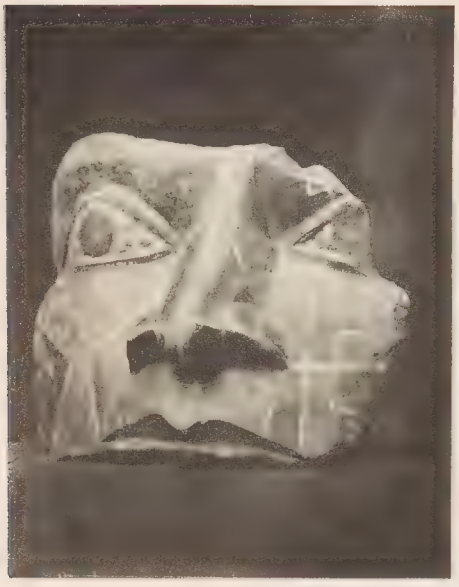








































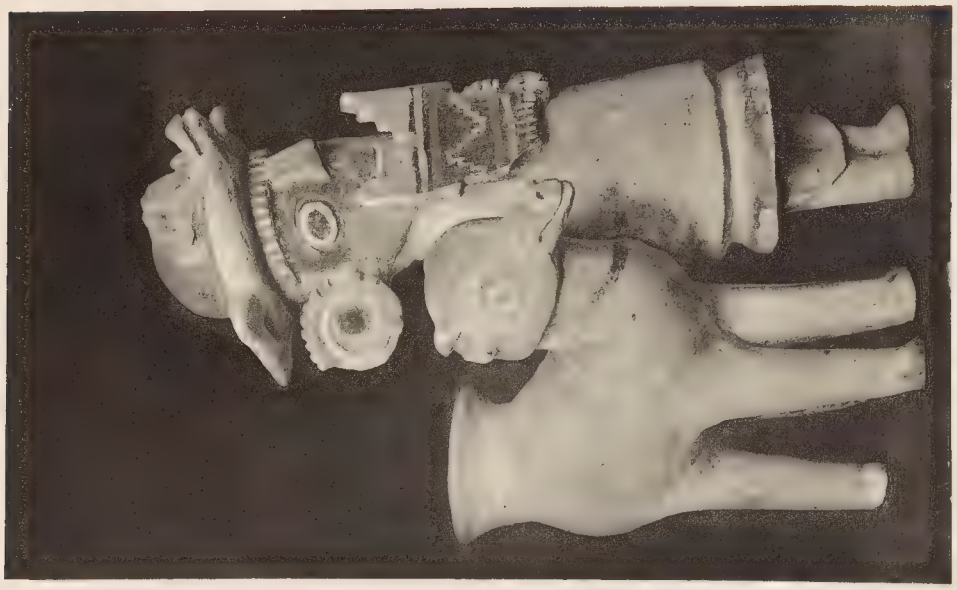


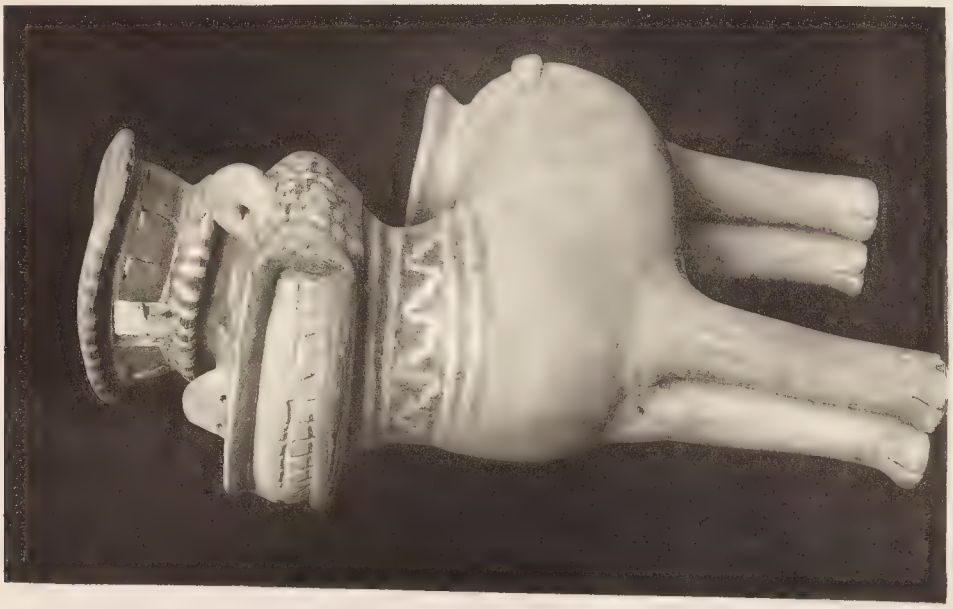










































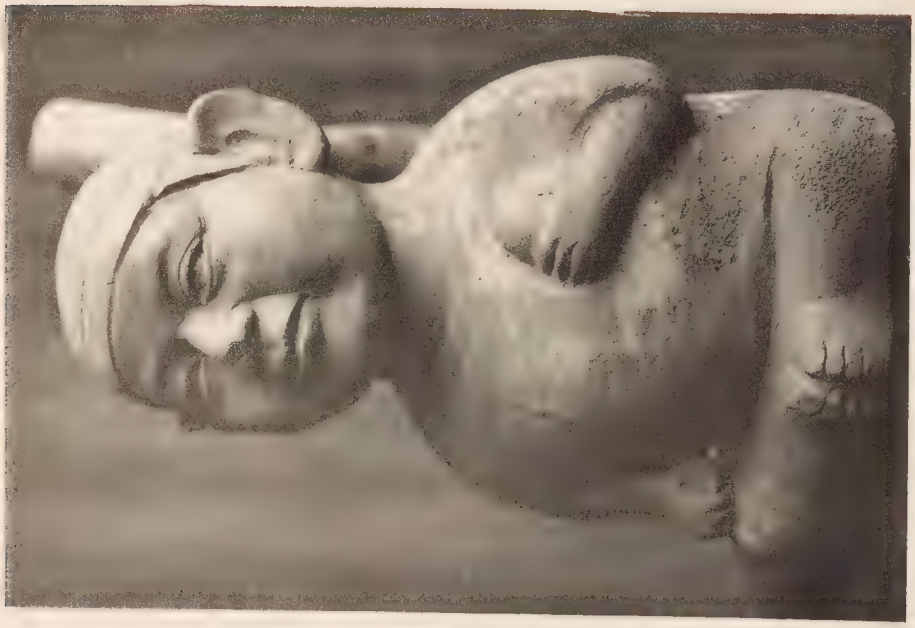


















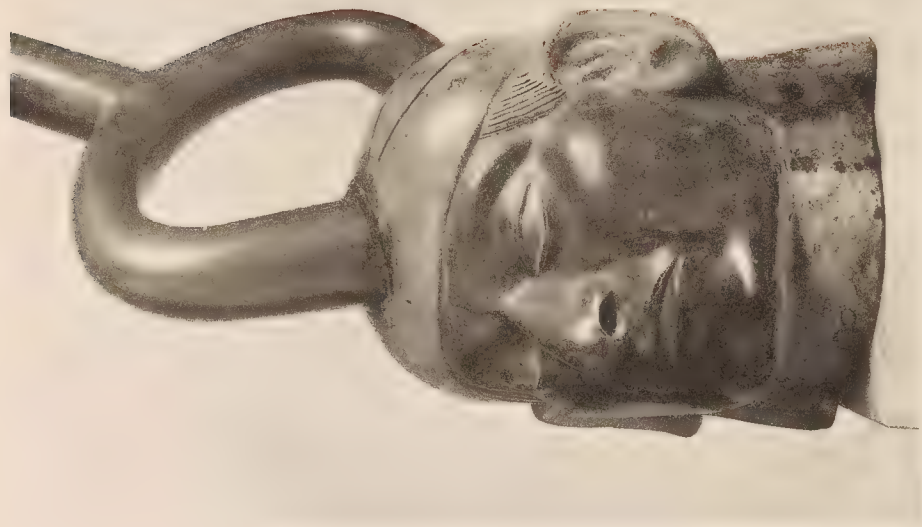










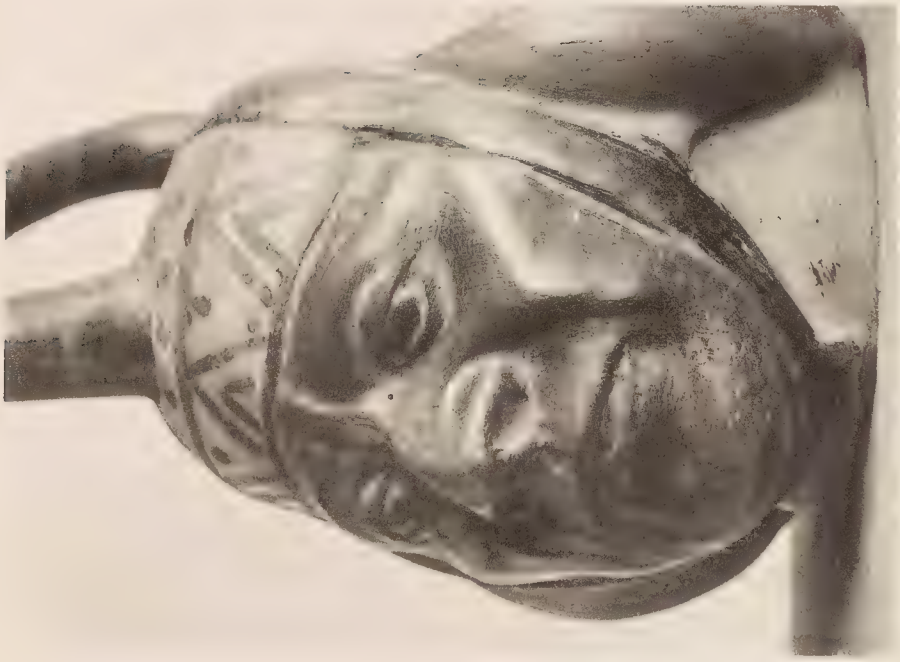
















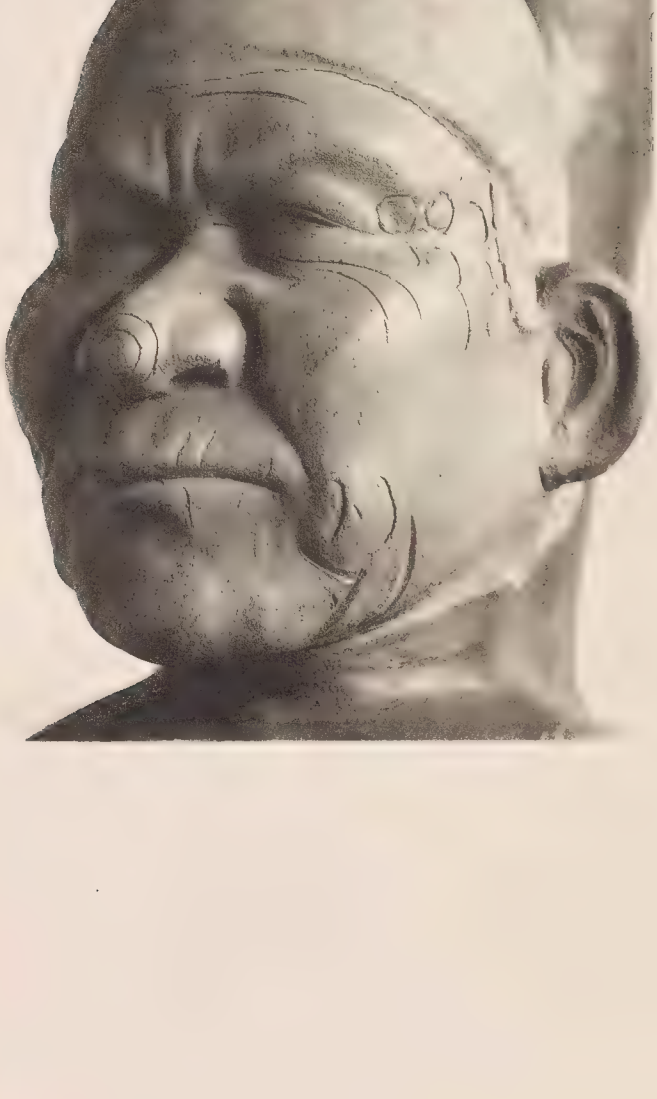












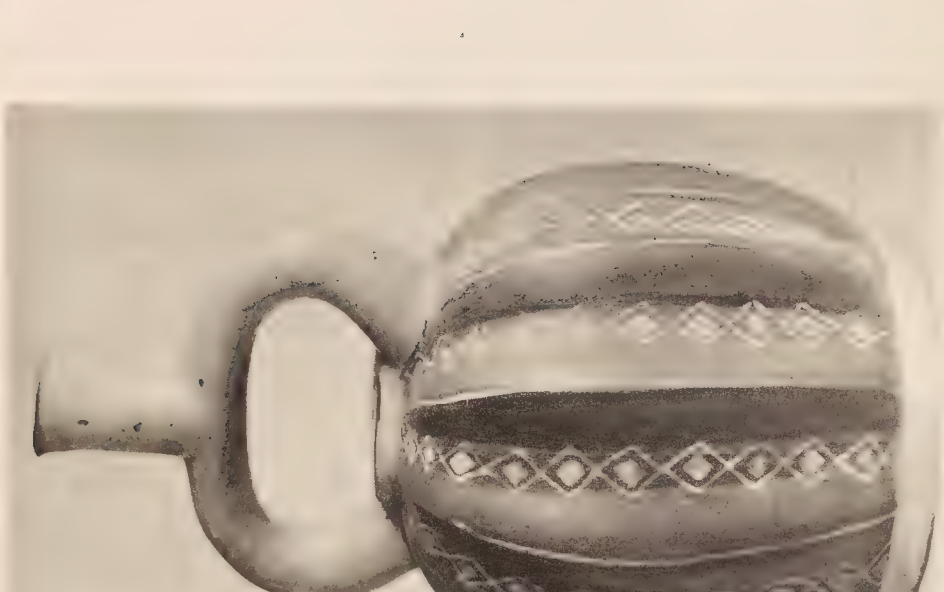


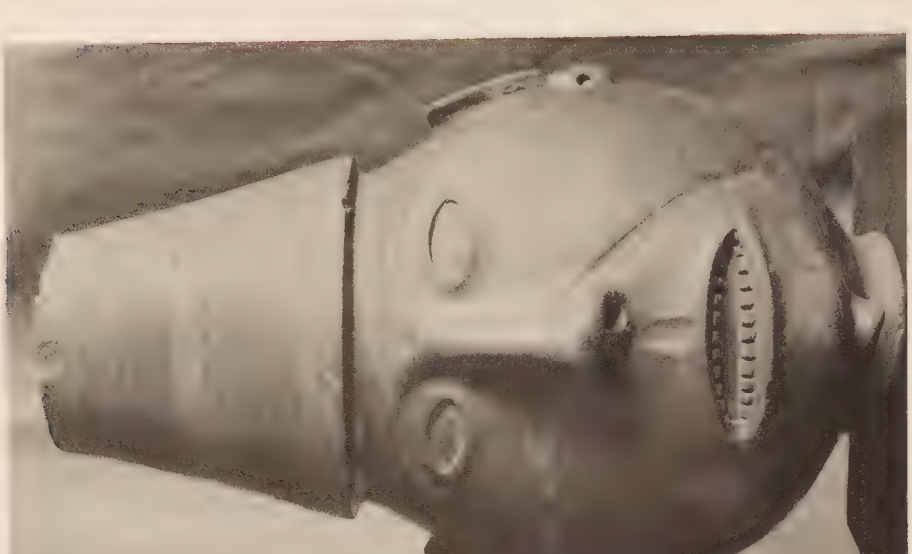


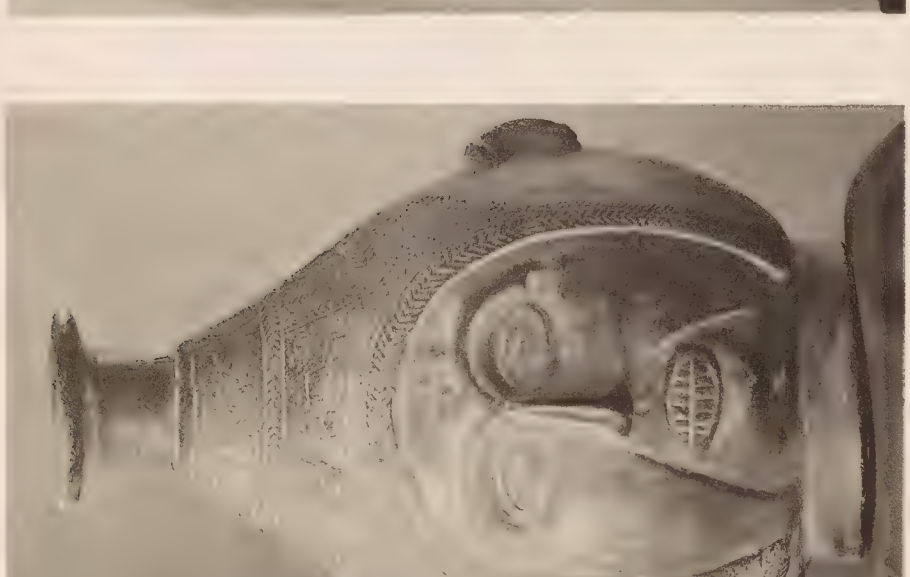




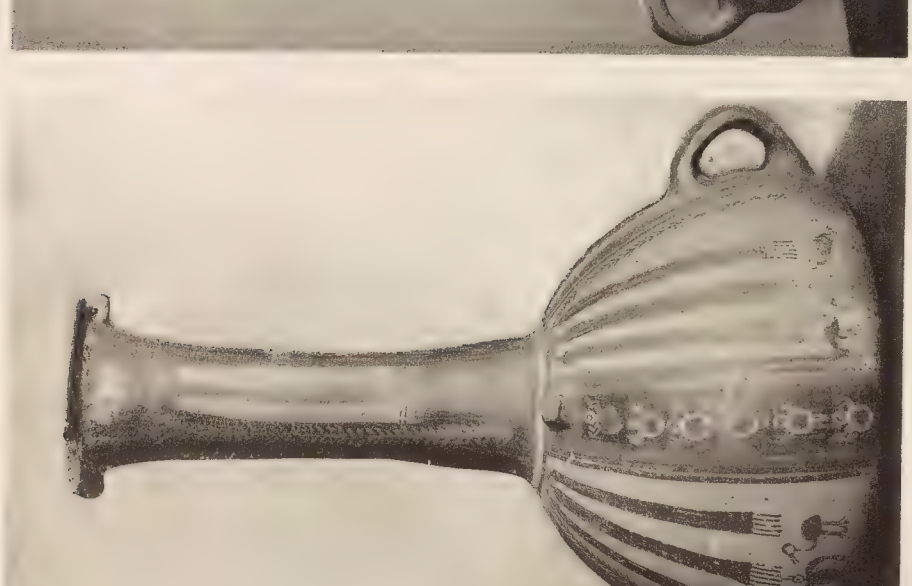






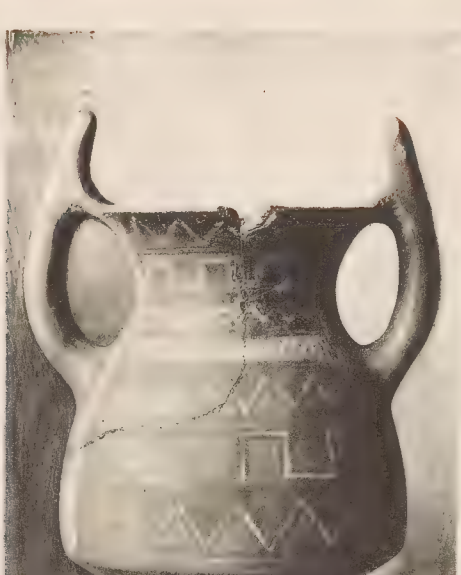




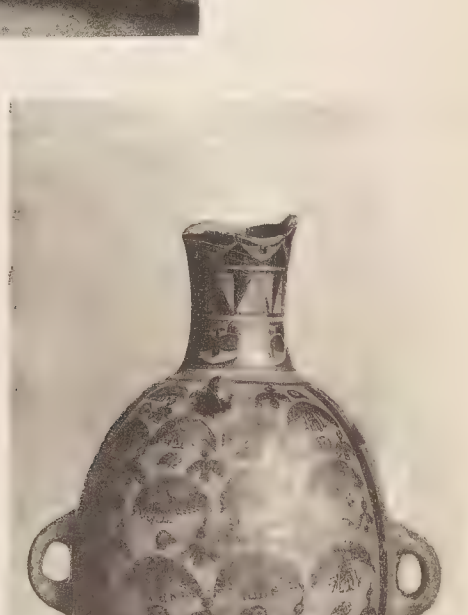








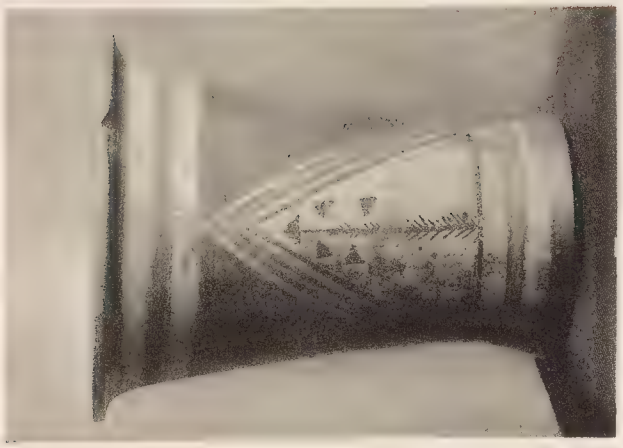






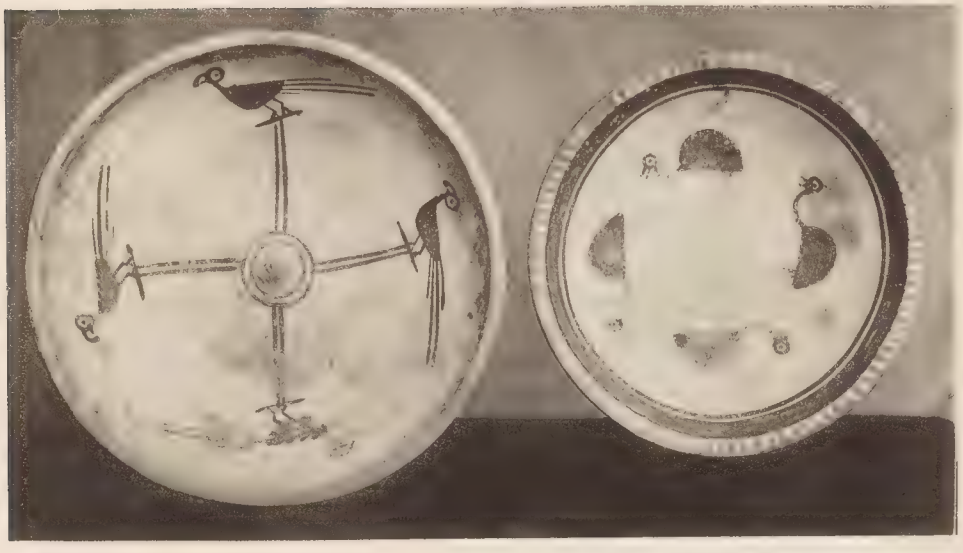












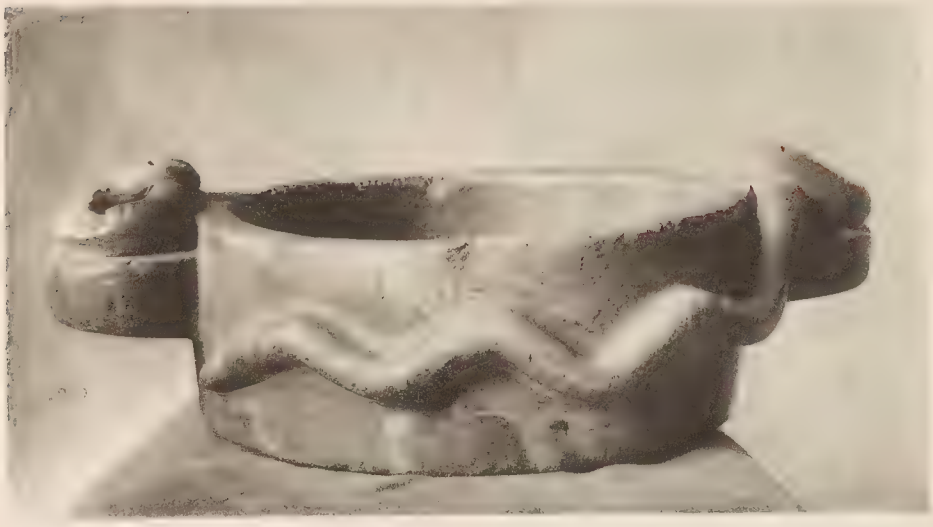








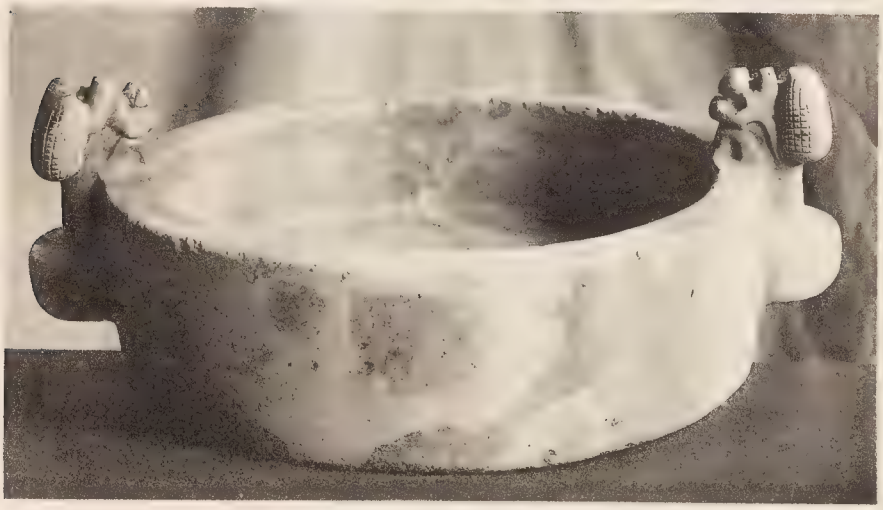












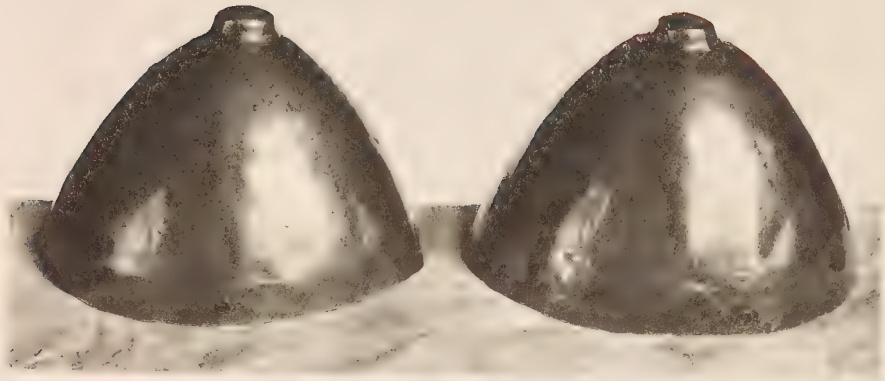






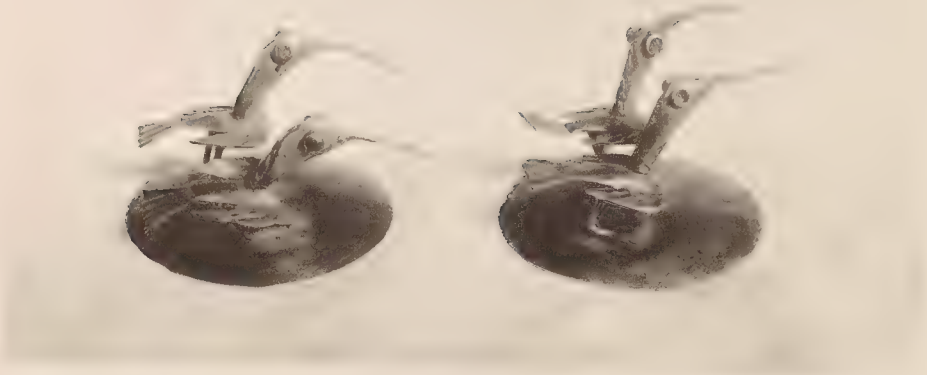




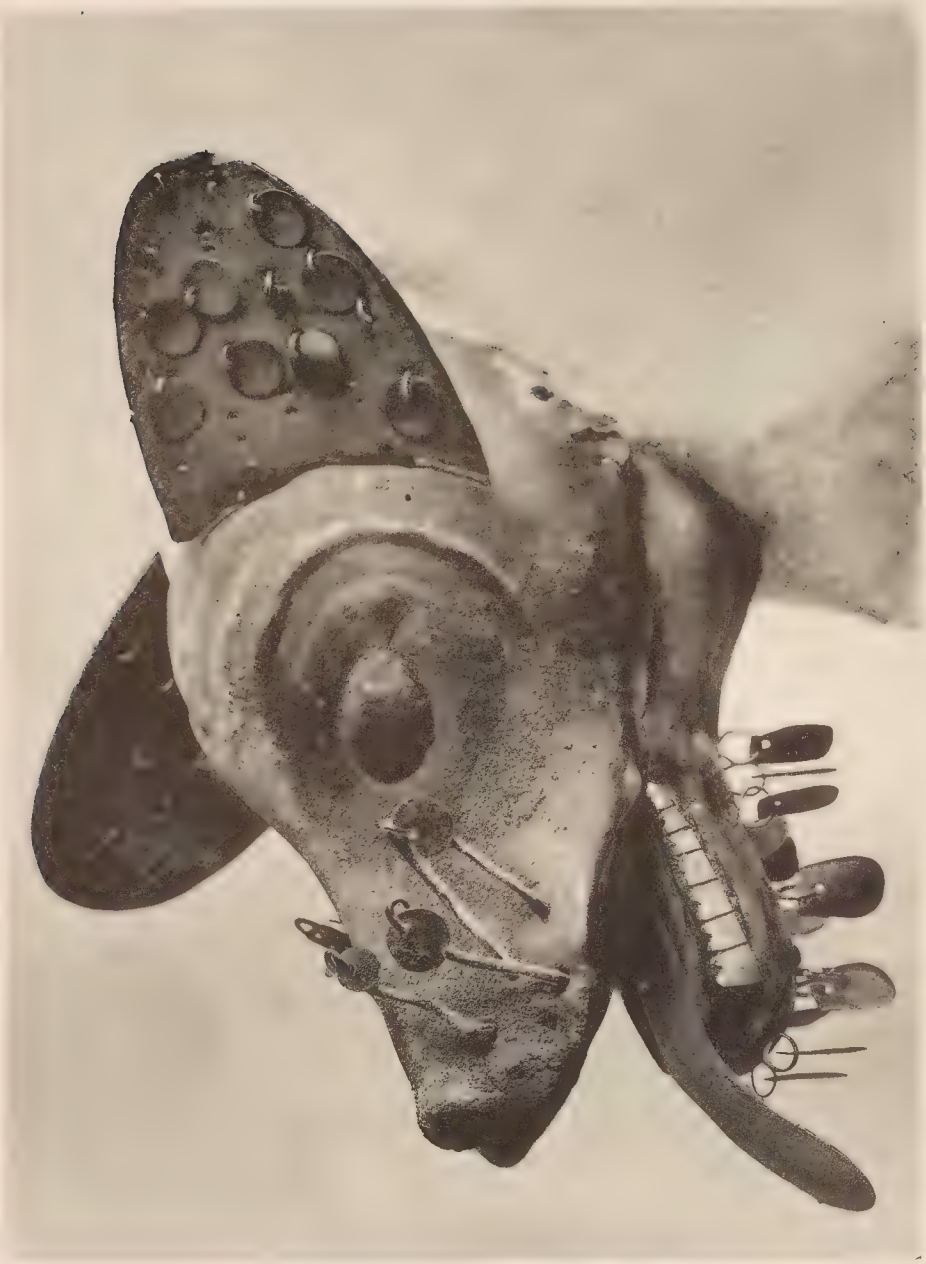


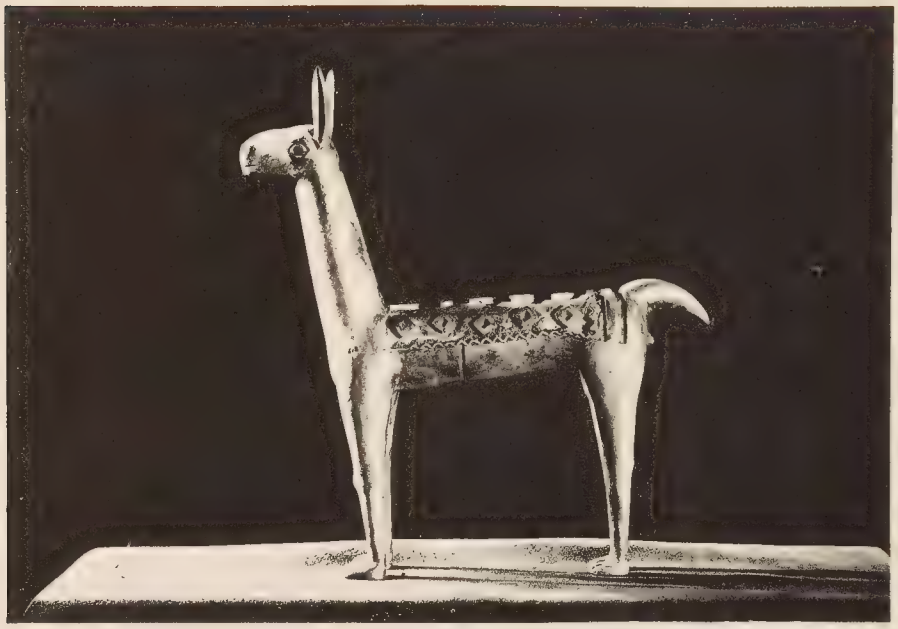


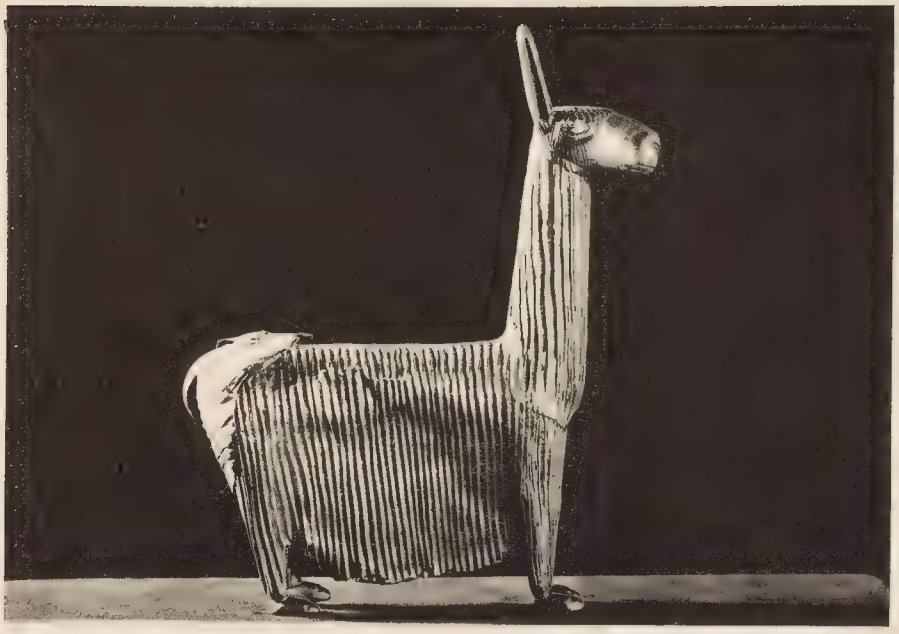












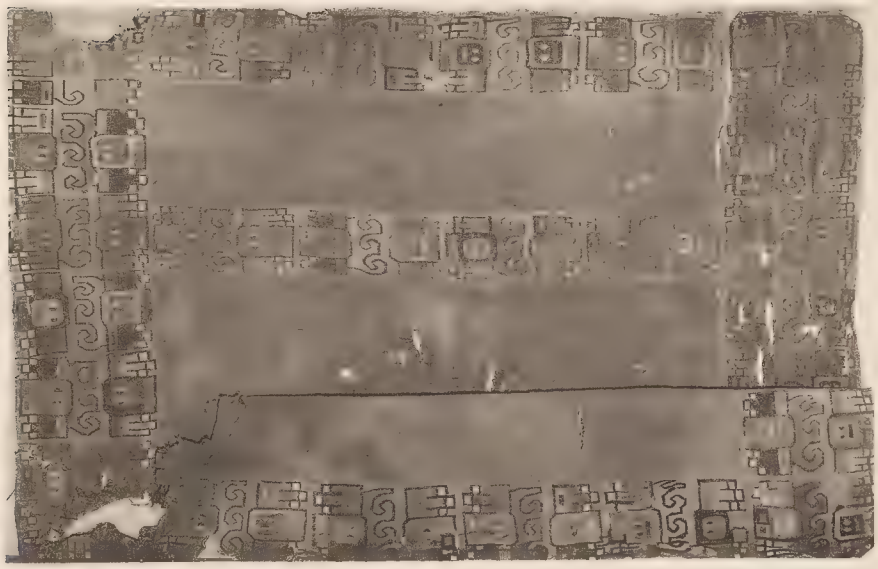




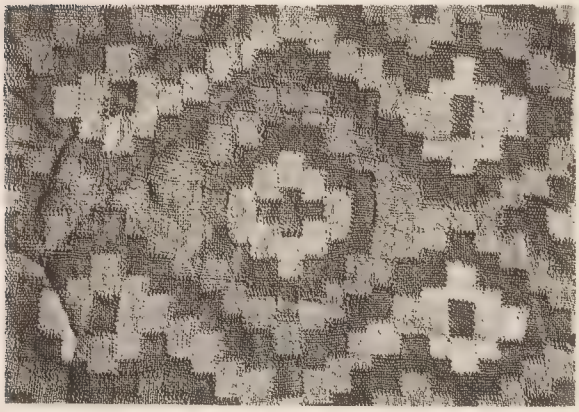


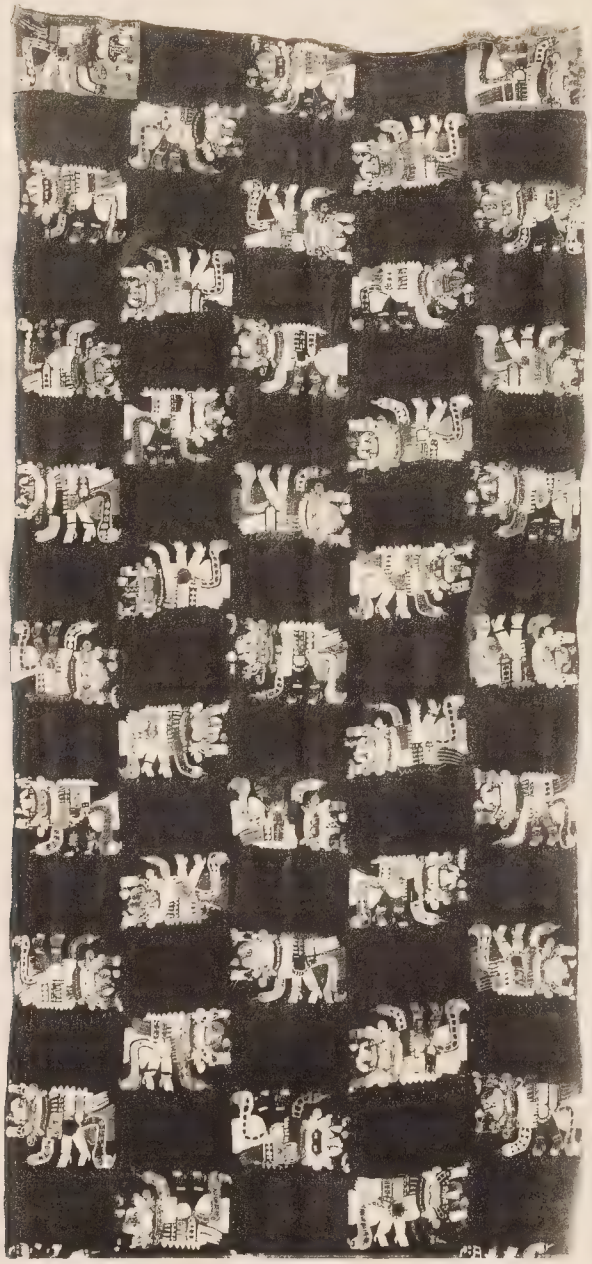


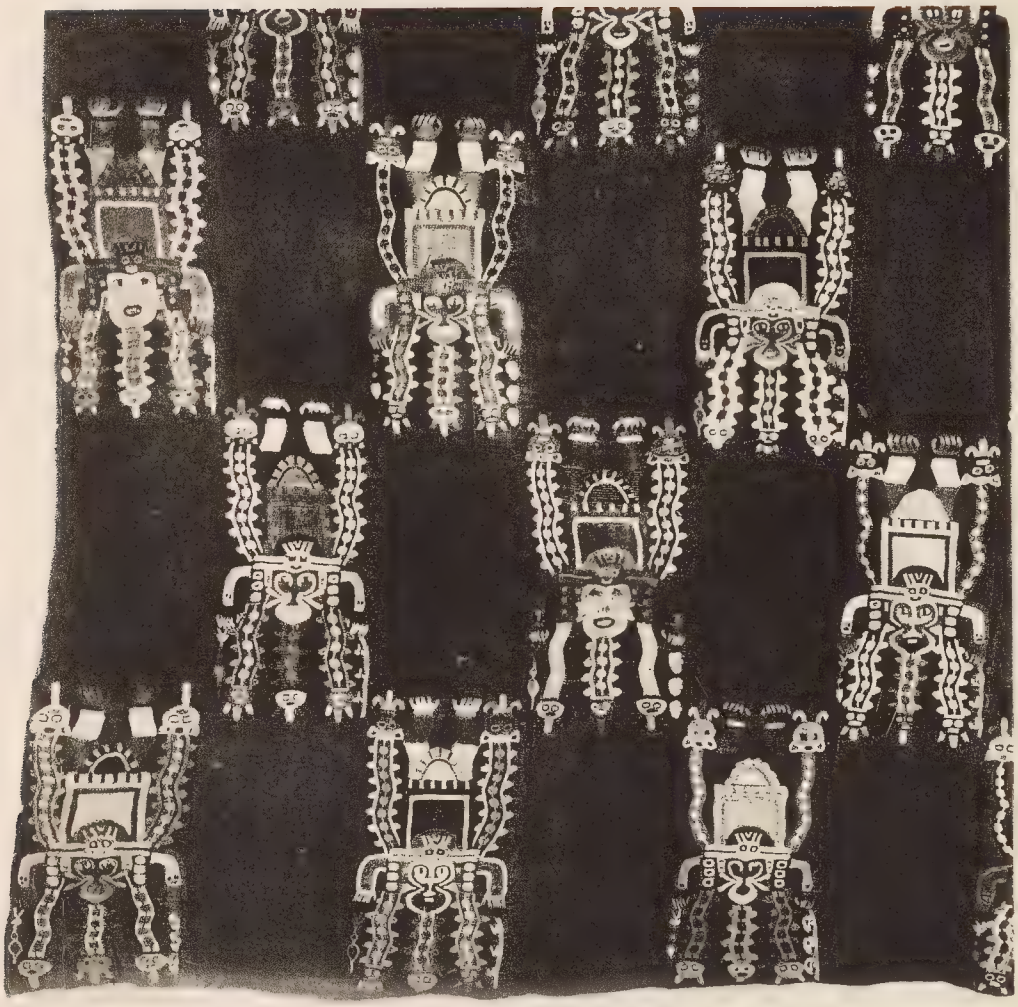


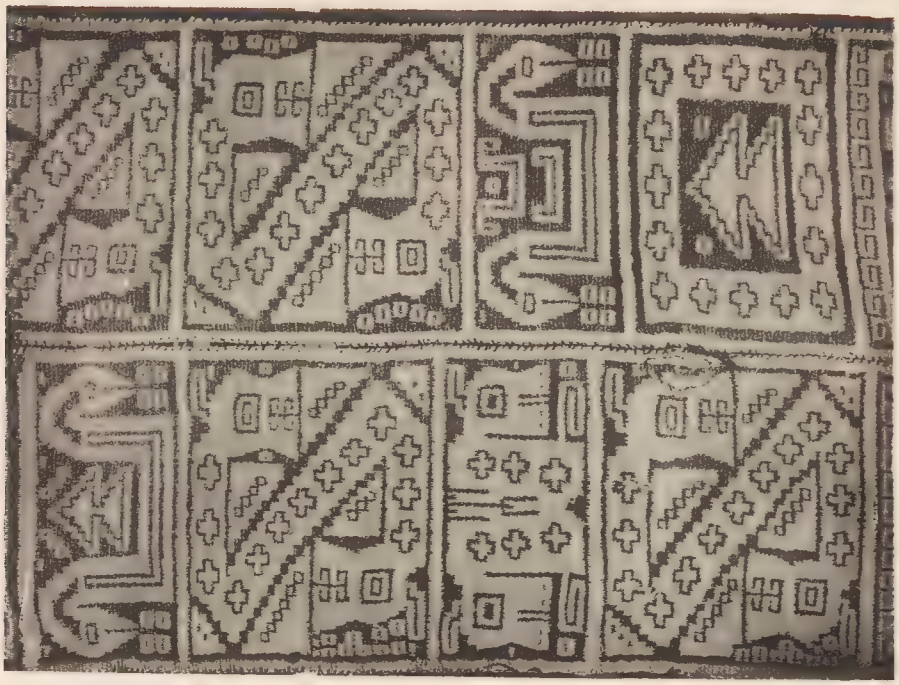


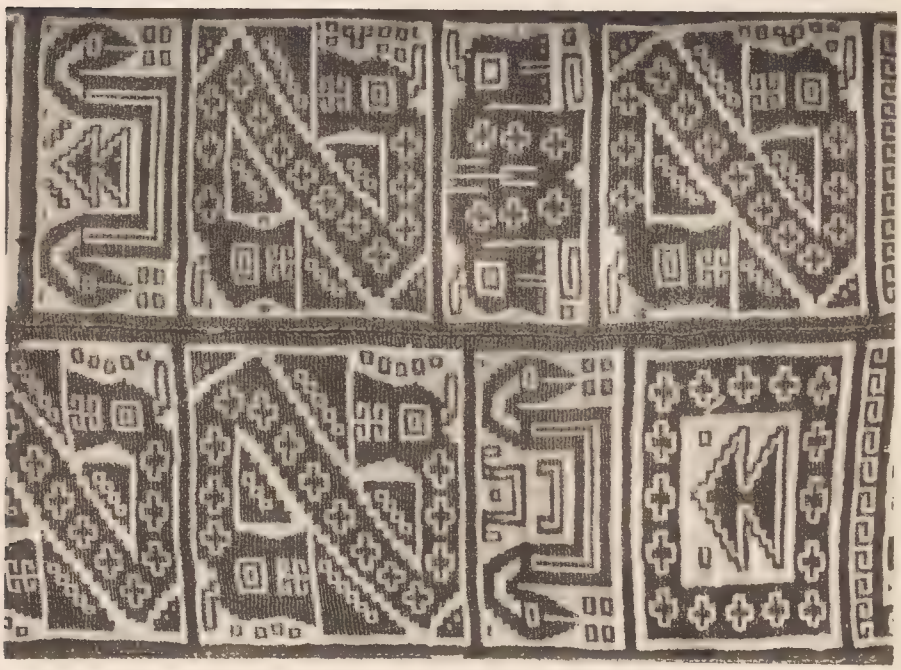






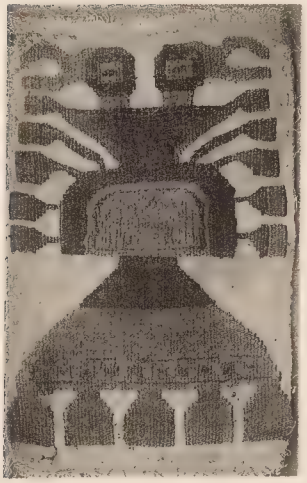








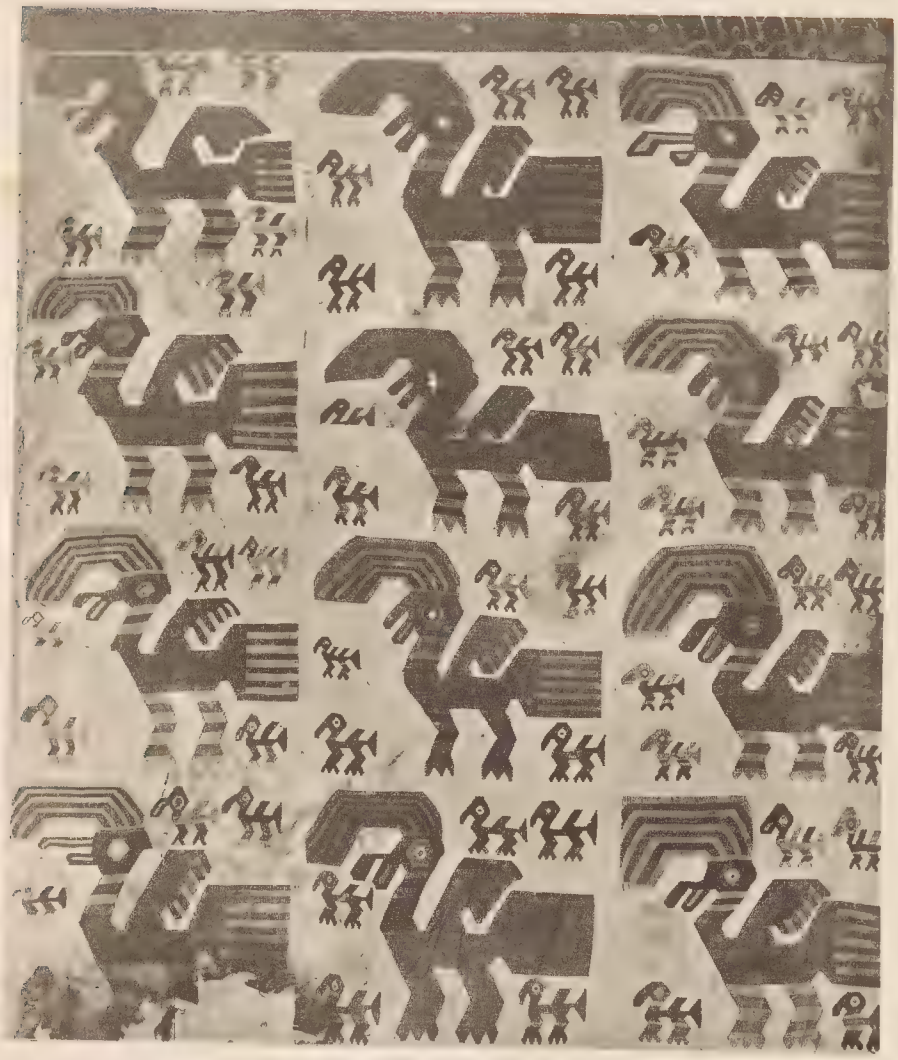


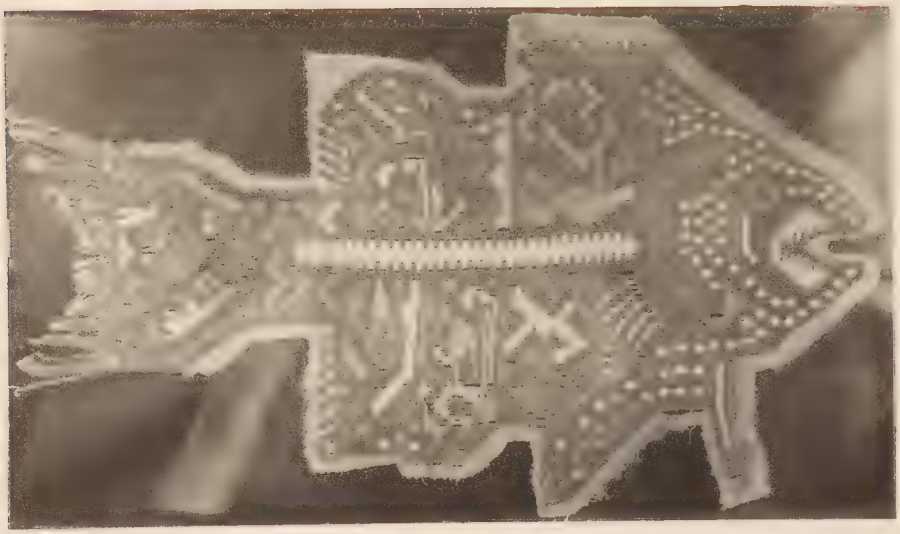






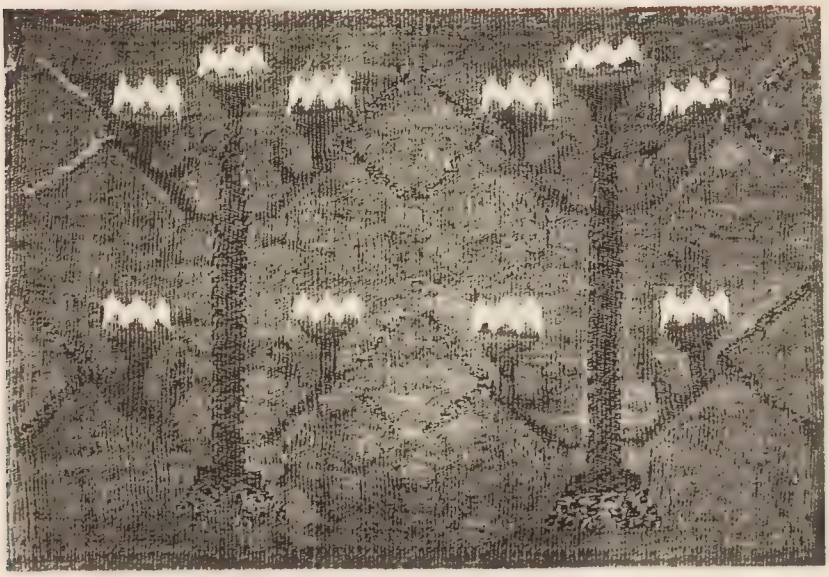


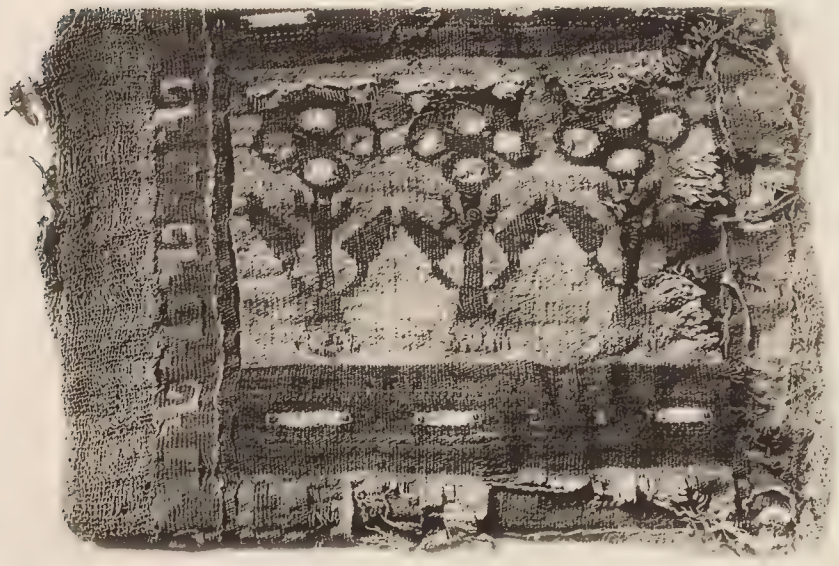


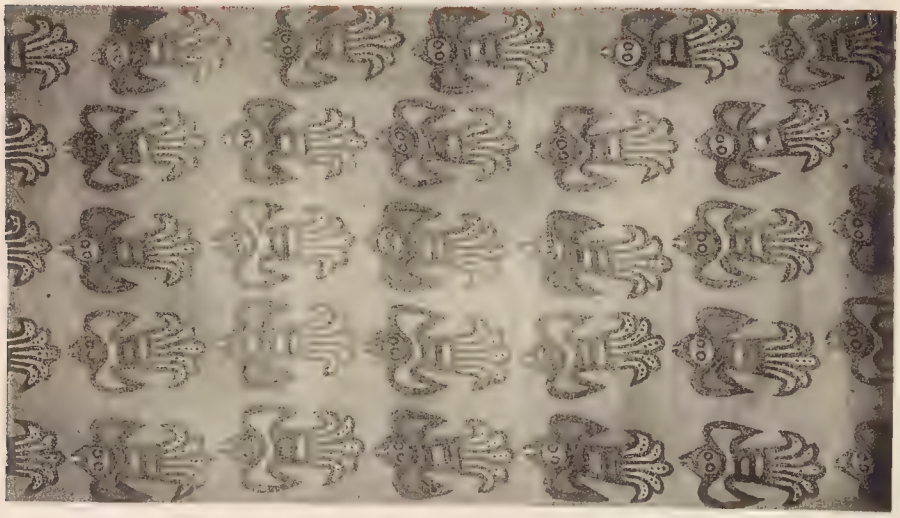






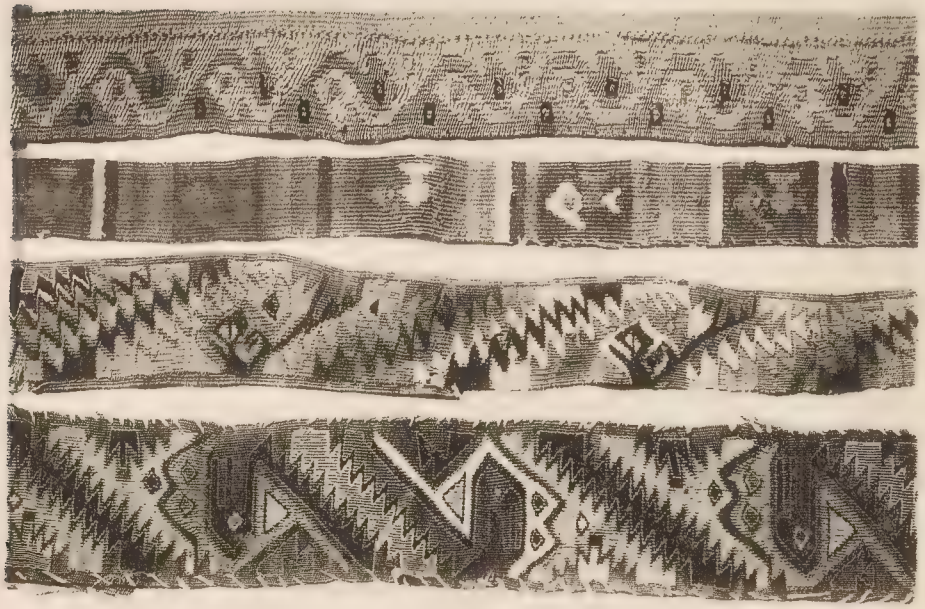






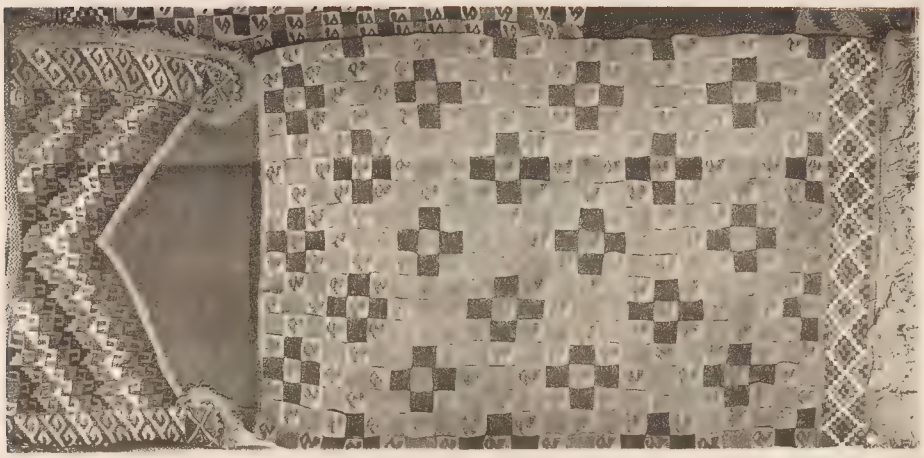


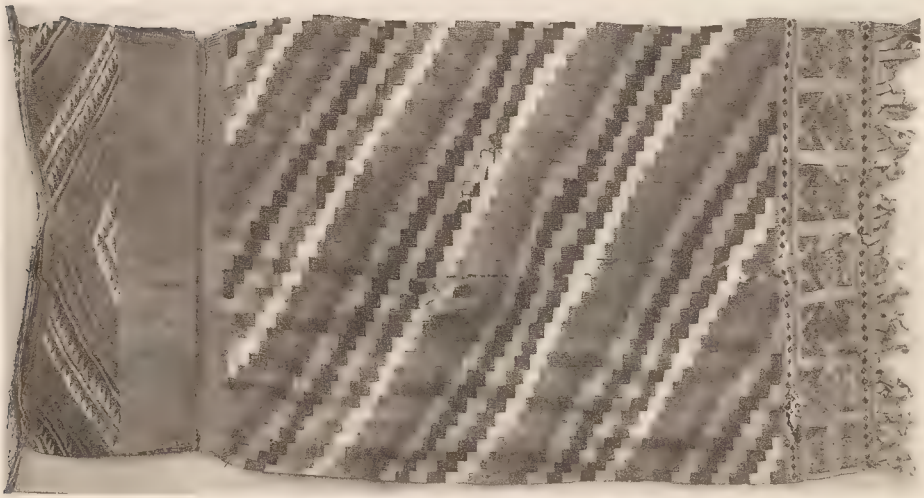














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